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THE UNIVERSITY OF ALBERTA

A FREE RESPONSE CONTENT ANALYSIS OF CAUSAL ATTRIBUTION

by

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A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF SCIENCE

DEPARTMENT OF PSYCHOLOGY

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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "A Free Response Content Analysis of Causal Attribution" submitted by Tamara Jocelyn Ferguson in partial fulfilment of the requirements for the degree of Master of Science.

Supervisor

Michael E.

Date 31..March..1977

I would like to dedicate this thesis to my grandmother, Jocelyn B. Layton, for her encouragement from afar and her love, which is always so very near.

ABSTRACT

The questions regarding the relationship of information selection, information relevance, information parallelism, and distraction to the task of causal attribution cannot be answered adequately using extant social psychological methodologies alone. An attempt was made in this investigation to develop an alternate methodology for the purpose of studying these aspects of the phenomena of causal attribution.

Participants viewed a videotaped social interaction, after which they composed descriptions of and explanations for the observed activities. Participants were asked to consider several categories of causally relevant information, derived from the theoretical literature on attribution, at various points during the procedure, viz., prior to (a) observing the scenario, (b) describing the scenario, or (c) causally evaluating a target actress' behavior. A control group was not asked to consider these categories of information. In addition, half of the participants were distracted from thinking about the causal set instruction and/or the scenario prior to the description phase of the experiment.

The results of the content analyses of descriptions and explanations generally revealed that (a) few references were made to the theory-derived categories of causally relevant information, unless references to these categories were explicitly requested, (b) more references were made to causally relevant kinds of information within explanation than within description, (c) free response attributions did not correspond very highly with typical rating scale measures of attribution and, finally, (d) distraction minimally affected explanation, but, in conjunction with causal set, distraction significantly affected description.

The advantages and disadvantages of using the developed methodology in the area of attribution were discussed.

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In addition, I extend my deepest thanks to the following "cast of characters" for their love of beer and of science:

SCENARIO PRODUCTION

Major Cast	Role
Heather Davidson	the "Bitch"
John McDermott	the "Boyfriend"
Keith Horton	the "Fiend"
Marion Nicely	the "Waitress"
Michael Katzko	the "Drunk"
Kenneth Meehan	the "Hero"
Lois Mullin	the "Molestee"
Don Severance	the "Friend"
Mike and Kathy Harvey	the "Happy Couple"
Diane Love	"Bombshell #1"
Angeline Verenka	"Bombshell #2"

Supporting Cast

Ghislaine Campbell, Dona Carlson, Ken Hill
Mickey McDermott, June Ross, and Mary Ann Gillese-Schmidt

Camera Crew

John Schmidt, Bryce Schurr, and Warren Thorngate

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THESIS FORMATTING AND EDITING

Michael Katzko

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INTRODUCTION

Theoretical explanations of attribution attempt to specify how an individual perceives the causal determinants of events in his environment (Bem, 1972; Heider, 1944, 1958; Jones & Davis, 1965; Kelley, 1967, 1971a,b, 1973, 1976; Kruglanski, 1975). A broad spectrum of objectives has guided the theoretical work on attribution, ranging from descriptions of the classes of stimuli external to the individual which affect causal attribution (Jones & Nisbett, 1971) to descriptions of the nature of the processes which might account for attributional differences (Kelley, 1971b). The research on attribution is multi-faceted, as well, emphasizing both the examination of processes involved in deducing causal explanations (Cunningham & Kelley, 1975; Newtson, 1973, 1976) and the behavioral consequences engendered by them (Ickes & Kidd, 1976; Rule, Nesdale, & McAra, 1974; Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1971). Within the research area of attribution, a great deal of attention has focused on assessing the nature of the covariation between the input (i.e., stimulus conditions) and the output (i.e., behavioral consequences and/or causal attributions) parameters which presumably define the boundary conditions of the attribution process(es).

Unfortunately, few questions have been raised within the area regarding the validity and representativeness of the observed input-output relationships. A wealth of information is available regarding the way in which "attributions" and even behaviors vary as a function of the employed variations of input. Yet, very little is known about (a) whether the differences obtained on the typical measures of attribution actually represent real differences in causal explanation or (b) how variations in input affect differences in more naturalistically produced causal attributions.

These kinds of information are not available, primarily because investigations of attribution typically use the standard methodology of social psychology, i.e., "...the experimental episode cum analysis of variance..." (Taylor, 1976, p. 3). Adoption of this methodology alone ignores two very important considerations, i.e., what the respondents do with the information available to them before requests are made for causal attribution and how the respondents interpret the presumed measures of causal attribution.

The present investigation was guided by the beliefs that research on attribution should not confine itself to a simple hypothetico-deductive approach and that, secondly, attempts should be made to adopt more representative (or naturalistic) research methodologies (Brunswik, 1955). The discussion which follows will examine: (a) one of several conceptual problems, specifically, information relevance as a basis for selection or salience interpretations of resultant differences in causal attribution, which has been examined within the empirical work on attribution, (b) the research strategies which have been employed to examine this problem, (c) the limitations of the research strategies, and

(d) the criteria which might be employed to develop a methodology more appropriate to addressing the problem. An alternative methodology, designed for use in investigating information selection differences and attribution, will then be presented.

The problem of specifying what kinds of information are relevant to the causal analysis is of major concern to those working within the area of attribution. This problem has been approached from two conceptually distinct, but related, perspectives. The first perspective emphasizes an elucidation of those categories of information which, by virtue of an individual's previous experiences, might be historically relevant to the causal analysis. The assumption underlying this perspective is that there are direct or inferred categories of information which are relevant to a causal analysis. Some or all of these categories of causally relevant information are presumably retrieved from the individual's memory store when the attribution process is engaged. For example, when an individual is asked to evaluate why a target person performed well on a given task, he/she might retrieve information from memory regarding how well others have performed on the same task. If the individual recalls that most people have succeeded at the task, an external (or task-related) attribution would probably be made, whereas if the individual recalls that most people have failed at the task, then an internal (or target-related) attribution would probably be made.

The empirical work pursued within this perspective has focused upon the effects which various combinations of causally relevant information categories of different magnitude have on the outcome of the attribution process(es). Kelley's (1967) tripartite taxonomy of causally relevant information (i.e., consensus, distinctiveness, and consistency information) and the research fostered by this taxonomy (e.g., Cunningham & Kelley, 1975; Garland, Hardy, & Stephenson, 1975; Hansen & Lowe, 1976; McArthur, 1972; Nisbett & Borgida, 1975; Orvis, Cunningham, & Kelley, 1975) represent the major prototype of this perspective. In this vein of research most emphasis has been placed on determining whether or not individuals can use these kinds of information.

The second perspective is also concerned with identifying categories of information which are relevant to the causal analysis, although it is rarely characterized in this way. A great deal of attention has been paid within the second perspective to accounting for why attributional differences occur with certain variations in the environmental context. Explanations for observed differences in attribution are sometimes centered around postulated differences in information availability, selection, or usage. With this explanation in mind, attempts are made to delineate those broad classes of factors which might be responsible for producing differences in information availability, selection, or usage.

These attempts are pursued in one of two ways: (a) empirical specification of characteristics of the individual which at least partially account for information availability, selection, or usage differences (e.g., developmental differences, differences in achievement motivation) or (b) empirical specification of characteristics of the situation which will result in differences in information availability, selection, or usage (e.g., task difficulty, severity of the task outcome) and subsequent attributions. Jones & Nisbett's (1971) conceptual analysis of "actor-observer" differences in causal attribution is the best exemplar of the second perspective. The research stimulated by Jones & Nisbett's analysis has focused on delimiting characteristics of the situation which will produce or eliminate actor-observer differences in causal attribution by _indirectly_ eliminating actor-observer differences in information availability, selection, or usage (e.g., Arkin & Duval, 1975; Hansen & Lowe, 1976; Storms, 1973; Taylor & Fiske, 1974).

In brief, the kinds of empirical questions posed by these two perspectives best distinquishes between them. Kelley and other researchers in the area have attempted to determine whether or not consistency, consensus, and distinctiveness information differentially affect the attributions offered. The research stimulated by Jones & Nisbett has focused on determining which set of factors will account for actor-observer differences in causal attribution, with little regard for the information selection or processing differences which may be responsible for them. In the final analysis, however, the task confronting both of these research areas is the discovery of those features of the environment or of the individual which ultimately affect differences in information usage and, hence, differences in causal attribution.

Both areas have failed to formulate the task at hand in this manner. Kelley has not seriously considered the question of how well his taxonomy of causally relevant information corresponds to the categories of information normally employed by individuals in more mundanely realistic social situations. Research within Jones & Nisbett's framework has only demonstrated that there are differences in actor-observer attribution, but even these are manifested only under certain restricted conditions (e.g., when the actor does not have the opportunity to evaluate his behavior objectively, Storms, 1973); very few research findings in this area directly indicate how actor-observer perspective differences affect differences in information selection and how the kinds of information used by actors and observers differ. These observations prompted a closer examination of information relevance and selection in causal attribution. An attempt to make this examination developed into four major objectives, each of which is outlined below.

Objectives of the Study

Assessment of subjective categories. The first objective of the investigation was to assess whether or not individuals would include information within a set of written protocols which could be classified as information relevant to the causal analysis and then to compare the kind of information included to Kelley's categories of causally relevant information. Because of the fact that Kelley has only employed pre-defined stimulus categories in this area of research, it is difficult to determine how well his categories represent the information individuals normally (or routinely) bring to bear on their causal analyses. An attempt was made in this study to assess the correspondence between Kelley's pre-defined categories of causally relevant information and the information upon which individuals naturally seem to focus and later "select" for use in their causal analyses. This was accomplished by requesting participants in the present study to observe a social encounter while at the same time thinking about (or not thinking about) consistency and consensus information. [1] After the participants observed the social encounter, they were required both to describe and causally evaluate the observed social encounter in their own words. A content analytic procedure was then applied to their descriptions and explanations to determine the extent to which Kelley's information categories were emphasized and to identify other kinds of subject-generated causally relevant information categories.

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[1] Distinctiveness information was not included because it was obvious that the specified target behavior was not distinctive.

Assessing the effects of causal set and distraction. The second objective of the present investigation was derived from Jones & Nisbett's analysis of actor-observer differences in causal attribution. Their analysis includes several processing explanations of actor-observer differences in causal attribution. Jones & Nisbett claim that assuming the role of actor or observer has the effect of altering the primary goal of the interaction for the participant. They then postulate that different kinds of information are salient to actors and to observers because the actor has different goals (e.g., successful completion of the immediate task requirements) than the passive observer (e.g., simple observation of the actor's behavior). They further propose that different kinds of information are available to actors and observers and, hence, that different kinds of information are used by them in the causal analysis. According to this analysis, actor-observer differences in causal attribution can be accounted for by perspective differences in information availability, selection, or usage.

Although these propositions appear to be reasonable prima facie, they are subject to at least three criticisms. First of all, the propositions cannot be tested using extant social psychological methods. Thus far research on actor-observer differences in causal attribution has included no information gathering techniques sensitive to perspective differences in information selection or usage. Inclusion of these techniques is necessary for an adequate test of the propositions.

Secondly, it is not clear at what point during the course of a typical experiment the actor-observer role requirements give rise to later differences in information usage. The procedures employed in research to date first impose the actor or observer role requirements, induce the actor to perform and the observer to watch a task (or set of tasks), and then make requests for causal attribution. Use of this kind of procedure makes it difficult to determine whether or not actors and observers actually use different kinds of information in their causal analyses or whether or not they process the same information differently. Most importantly, it is also not clear whether or not the process or usage differences are due to initial differences in information availability (i.e., different historical perspectives) or information selection (i.e., encoding differences), or later differences in information retrieval when requests for causal attributions are made (i.e., decoding differences) because of additional weaknesses in the employed methodology.

Ambiguity arises largely from the fact that two "goals" are made salient to actors and observers at different points during the course of an experimental session. The first "goal" is the adequate fulfillment of the actor or observer role requirements. The second "goal" is causal attribution. The processes by which the second goal is achieved may be identical for actors and observers; there may well be a one-to-one correspondence between the actor-observer processing of causally relevant information. Thus, the observed differences in causal attribution may only be accountable for in terms of earlier process differences. But, as yet, there are no methods employed within the actor-observer research literature to examine this possibility.

The third, and final, criticism concerns the fact that, by design, different processing constraints are imposed upon actors and observers during an experimental session. Actors are not only required to complete sucessfully an initial task(s), but they are also required to evaluate their performance (or reactions) in terms of its causal antecedents. In contrast, observers are only required to observe the actor's behavior, an activity which probably requires much less effort on their part and involves much less interference. It would seem reasonable to suggest then that the observer is not confronted with as many distracting influences as is the actor during the experimental session.

In fact, Jones & Nisbett followed a similar chain of reasoning to explain actor-observer differences in causal attribution. However, they failed to relate this reasoning to the processing variables which might be affected differentially by distraction. The simplest relation would suggest that distraction would affect the actor's and observer's intake of information. That is, observers would be more likely to encode very detailed aspects of a situation than would actors. Hence, the extent to which actors and observers are differentially distracted from attending to the subtle details of a situation may, in part, account for the observed differences in causal attribution.

Observers are generally more inclined to make dispositional attributions for the actor's behavior. Although speculative, this tendency may be due to the possibility that observers encode a broader immediate base of information (e.g., environmental and historically derived personal information) and also have the time to consider this information in fuller detail than actors. Given this possible state of affairs, a complete analysis of the available information may warrant a dispositional attribution. The actor, on the other hand, has a task to perform; successful performance of the task requires more attention to the circumstances surrounding him than to personal self-reflection. Given the time processing constraints imposed by task performance, the accessible dispositional or personally relevant information may simply be ignored. By interference, actors are almost forced to make situational attributions--they do not have the time to do otherwise.

The rather detailed account of Jones & Nisbett's actor-observer analysis of causal attribution is offered because it serves to highlight several interesting points regarding the manner in which the "goal" of an interaction might differentially affect information availability, selection,or retrieval. The present investigation was designed, in part, to examine the possibility that information selection differences can be induced by (a) varying the time of onset of the primary goal for the participant as well as (b) distracting the participant from thinking about an earlier observed social encounter.

In order to examine these questions, a methodology was developed which was based on suggestions made by Jones & Thibaut (1958). According to Jones & Thibaut, individuals will be sensitive to different kinds of information depending upon their primary goal(s) in the situation. They identified three inferential sets, each of which was presumed to make different goals salient to the individual, viz., the value-maintenance, situation-matching, and causal-genetic sets. In order to determine whether or not different classes of information were relevant to each of the inferential sets, they suggested that a joint role-playing/information-seeking methodology be employed in the research. This methodology required participants to role-simulate one of the three inferential sets vis a vis the observation of a target person's behavior. Following the observation period, the participants engaged in an information-seeking task.

This task involved the selection of that information necessary to fulfill adequately the requirements of their assumed roles. This was accomplished by presenting the participants with a pool of questions to which answers would be provided by the experimenter. Participants selected from this pool of questions those for which they most desired answers.

Employing this technique allowed Jones & Thibaut to assess the kinds of information which were most relevant to each of the inferential sets. Information relevant to each set was identified by determining the relationship between the induced set and those classes of information which were sought by the participants.

The methodology devised by Jones & Thibaut seems more appropriate to the examination of information selection (and, possibly, information usage) differences in causal attribution than the methodology typically employed in attribution research for two reasons: (1) Jones & Thibaut have employed more adequate measures of information selection and (2) the goal of the interaction is explicitly defined for the individual. The present investigation adopted their technique of role-simulating the predominant goal of a social encounter. However, rather than introducing the goal only at the outset of an encounter, the goal of causal evaluation (somewhat comparable to Jones & Thibaut's causal-genetic set) was introduced at one of three points during the course of an experimental session: prior to the observation of, the description of, or the causal explanation for the presented scenario. This manipulation was used to ascertain what effects, if any, variations in time of goal introduction have on the information included within the descriptions and explanations and on the attributions made.

In this study, the primary goal of the participants was to causally evaluate a specified target actress' behavior. Unlike Jones & Nisbett, only observers were used in this investigation. Following the observation of a social encounter, observers were required to provide some indication of the kinds of information to which they attended at different points throughout the course of the experiment by describing and causally evaluating the observed social encounter. A recall method was used to make this assessment.[2] In addition, participants were variously distracted at one point during the experiment to determine what effects, if any, distraction had on the participants' recall for the observed social encounter and their subsequent causal attributions. for the observed social encounter and their subsequent causal attributions.

Investigating Description-Explanation Relationships. The third objective of this investigation was to assess the extent to which the causally relevant content identified within the description protocols corresponded with the causally relevant content identified within the explanation protocols.

The description task was primarily designed to assess the participants' memory (or recall) for the observed social encounter, while the explanation task was designed to assess the causal inferences made by participants' on the basis of their previous observations. However, on the basis of research conducted within cognitive psychology and psycholinguistics, it was believed that the participants in this study would include more than "descriptive" information in their descriptions. This research has found that individuals consistently give more than verbatim recounts of a previously observed (or read) scenario (e.g., Bransford & Franks, 1971; Crothers, 1972; Frederiksen, 1973, 1975a,b; Schioldborg, 1975). Rather, these studies have shown that individuals include derived or inferred categories of information in addition to actual information regarding the observed events (or actual text content) within their spoken or written reproductions. The inclusion of nonverbatim information is believed to represent the individuals' interpretation of what the observed scenario presupposed or implied with respect to some past or future state of affairs.

---

[2] An unprobed recall method was employed to avoid biasing the content of the description and explanation protocols.

Research within the social psychological literature has also found that individuals go beyond the observed evidence to inferences regarding non-observed, but related kinds of information (e.g., Abelson & Kanouse, 1966; Kanouse & Gross, 1970; Nisbett, Caputo, Legant, & Maracek, 1973; Zadny & Gerard, 1974). Kanouse has suggested that a closer examination should be made of these kinds of inferential, yet presumably descriptive, information because they are good indicators of the way(s) in which the individual is representing (or labeling) the event-in-question. Kanouse advocated the pursuit of these kinds of analyses because he believed that the way in which an individual labels an event will importantly affect the kind of causal explanation offered (e.g., the generality of the explanation). According to Kanouse's analysis, then, a person's description of and causal explanation for an event should contain similar kinds of causally relevant information.

Attribution measurement. The fourth, and final, objective of the present investigation was to assess the degree of correspondence between the more naturalistic measures of causal attribution and those indices normally employed in attribution research.

In order to avoid overemphasizing the information indigenous to the descriptions and explanations in this study, the causally relevant information contained within the participants' descriptions and explanations was compared to information "external" to these essays. After the participants completed their descriptions and explanations, they were also required to summarize their causal explanations on two rating scale measures of causal attribution. The causal attributions made by subjects on the rating scale measures were then compared to attributions derived from the description and explanation protocols.

The rating scale measures employed in this study are those most frequently employed in the research on _causal_ attribution (for exceptions, see Fishbein & Ajzen, 1973 on _responsibility_ attribution; Weiner, et al., 1971 on measures of _performance_ attribution). Typically, in the causal attribution research, individuals evaluate the observed behavior in terms of the locus of causality dimension, i.e., the extent to which the target behavior was influenced by external (or situational) and internal (or personal/dispositional) factors. Participants in this study were required to offer their evaluations of the degree of influence of internal and external causal factors. Comparisons were then made between these ratings and the overall internal and external attribution ratings derived by the judges from the content of both the description and explanation essays.

In summary, six questions concern the present investigation: (1) What kinds of causally-oriented information are relevant to the tasks of describing and explaining an observed situation or behavior? (2) Is there a discernable relationship between the information defined as relevant to the causal analysis within the description and the explanation protocols? (3) How well do the protocol-derived categories (either invesigator- and/or subject-defined) of causally relevant information correspond with Kelley's taxonomy of causally relevant information? (4) Does the time at which the goal of causal evaluation is introduced affect the participants' recall for the observed event and/or his causal explanation for the event? (5) What effects, if any, does distraction have on the detail and accuracy with which a description is made and on subsequent attributions? and (6) How well do the currently employed rating scale measures of attribution correspond with derivations of more naturalistically produced attributions?

METHOD

Subjects

One hundred and twenty-eight University of Alberta

Introductory Psychology students (63 male; 65 female) served in the experiment to obtain course credit. Each subject participated individually and was randomly assigned to one of the eight conditions of the experiment, with the restriction that each of the two male experimenters ran an approximately equal number of males and females per condition.

Design

Two factors were manipulated in a 2 X 4 factorial design. Subjects were either distracted or not distracted following the observation of a videotaped scenario. In addition, subjects received the causal set instruction designed to elicit causal attributions for a target actress' behavior either (a) prior to observation of the scenario, (b) following observation of the scenario, but before being asked to describe the scenaric, or (c) following both the observation and description of the scenario. A fourth group did not receive the causal set instruction.

Apparatus and Materials

A videotape player was used to present the 15-minute silent scenario. Subjects viewed the taped scenario on a 57.5 cm television monitor. They were provided with a pencil and two booklets within which to write both their descriptions of the scenario and their explanations for the target actress' behavior. These materials were distributed at the appropriate times during the session. An audio-tape player was used to present the interpolated task which comprised the distraction manipulation.

Scenario

The subjects viewed a scenario located within a setting designed to portray a typical drinking lounge. Mixed and like-sex couples in their mid-twenties were seated at the tables. Each of the couples engaged in activities common to settings of this kind (e.g., drinking, conversing, smoking). One of the mixed couples, seated at the rear corner table, was the target couple. Most of the actions occurring throughout the scenario were centered around this couple. Other actions (e.g., a drunk attempted to "pick-up" a woman seated at another table with her date) were interspersed among the actions involving the target couple and were highlighted by camera switching techniques to maintain the subjects' interest and attention during their observation of the scenario.

The target couple engaged in various interchanges between themselves and with the other actors throughout the entire scenario. These interchanges were dominated primarily by the target actress, the female seated at the rear corner table. A number of minor conflicts between the target actress and the other actors were also portrayed throughout the course of the scenario. The nature of her reactions to these conflicts was kept ambiguous in order to stimulate some variability in the subjects' descriptions and explanations.

The final segment of the scenario consisted of an interaction sequence which subjects were later requested to describe and causally evaluate. This scene depicted a series of arguments between the target actress and an actor who had not previously appeared in the scenario. At the outset of this scene, the new actor arrived at the table of the target couple. After they exchanged greetings, the target actress produced a sealed document from her handbag and handed it to the new actor. The new actor proceeded to read the document and, while reading, displayed no negative reactions to its contents. The target actress then portrayed perplexity at the new actor's apparent lack of concern.

Acting confused, she attempted to highlight for both actors those portions of the document which concerned her. The two actors appeared to disagree with her interpretation of these sections of the document. Their reaction was followed by a heated argument among the three individuals, after which the target actress ceased responding and withdrew in apparent disgust. The two actors then portrayed making an attempt to console her. Their efforts being unsuccessful, they dismissed the actress' presence by waves of their hands and proceeded to converse between themselves. The target actress appeared to become upset with their unsympathetic reaction and prepared to leave the lounge. The new actor attempted to block her exit, but the target actress shoved him aside and stormed out of the lounge (see Appendix A for a more detailed description of the scenario).

Independent Variables

Causal set instruction. In order to manipulate the extent to which the subjects thought about the target actress' behavior, the causal set instruction requested that they consider a set of four questions and how they might answer them. The major questions posed to the subjects within the causal set instruction were: (a) "What happened during the videotape?," (b) "Why did the girl at the corner table behave the way she did throughout the videotape?," (c) "Would the girl behave similarly in other situations?," and (d) "Would other people have responded to this situation as the girl did?" The four questions were clarified for the subjects by supplementing each with the kinds of information they might want to consider in formulating an answer (see Appendix B for a copy of the causal set instruction).

For one-fourth of the subjects the causal set instruction was given after the general observation instructions, but before viewing the videotaped scenario (pre-observation condition); one-fourth of the subjects received the instruction prior to the description phase of the experiment (pre-description condition); one-fourth of the subjects heard the instruction after the description phase, but prior to the explanation task (pre-explanation condition); the causal set instruction was not delivered to the remaining subjects (control condition).

Distraction. Immediately after observing the videotaped scenario all of the subjects received instructions regarding the description phase of the experiment. Prior to completing the description phase, however, one-half of the subjects were asked to complete another task, unrelated to the primary tasks (distraction condition). The other half of the subjects were asked to sit quietly for the same period of time (no distraction condition).

The distraction task consisted of the aural presentation of 35 nouns, with a presentation lag of 10 seconds for each noun. Following the presentation of each target word, subjects were required to list the word or words of which it reminded them. This procedure was repeated until the subjects had been exposed to the entire set of target stimuli. The instructions and target stimuli were presented via audiotape and the procedure took approximately 15 minutes. (See Appendix C for a detailed description of the interpolated task.)

During this 15 minute interval the subjects assigned to the no distraction condition remained seated in the experimental room without access to any personal belongings, e.g., reading material, handbags, etc. (see Appendix D for a copy of the distraction and no distraction instructions).

Procedure

Upon arriving at the laboratory each subject was escorted to the experimental room which contained a desk, a videotape player and monitor, and an audiotape player. The experimenter introduced himself, requested that the subject be seated, and delivered a set of general observation instructions. These instructions informed the subject that the experiment was being conducted to determine how effective films with and without a soundtrack were in communicating the message or theme of a scenario. The subject was further informed that this objective would be accomplished by having him/her observe two videotape recordings, after which the experimenter would obtain the subject's general impressions and evaluations of each videotape. The subject was then told that his/her impressions and evaluations of each videotape would be compared with those of other subjects. In actuality, subjects viewed only one videotape (which did not have a soundtrack). After the experimenter insured that the subject understood the general observation instructions, he turned on the videotape player and monitor, then left the room while the subject viewed the 15-minute videotape presentation.

Immediately after this presentation, the experimenter re-entered the room and proceeded to deliver the general description instructions. These instructions requested that the subject attempt to describe the observed scenario in as much detail as he/she thought was necessary to communicate what happened to someone who had never seen it. The experimenter encouraged each subject to compose the description in as comprehensive a fashion as possible because other students would be reading it.

Immediately after these instructions were presented, the 15-minute distraction manipulation was introduced. At this time, the subjects assigned to the distraction condition were informed that the experimenter and a professor in the Psychology department were interested in collecting some information regarding the degree to which common, high frequency, four-letter nouns were associated with each other.[3] The experimenter noted that these data could be collected within a relatively short period of time and that, because of this, he and the professor had decided to administer this task during one of the longer experimental sessions for which the subjects were receiving two experimental credits. The distraction subjects were led to believe, then, that the task was included as an adjunct to the major experimental tasks. The experimenter then made the necessary arrangements for the distraction subjects to complete the interpolated task, i.e., the audiotape player was turned on and a response booklet and a pencil were given to the subject.

Subjects assigned to the no distraction condition were asked to sit quietly for the same 15-minute time period. These subjects were informed that the experimenter had some equipment changes to make, following which he would bring the writing materials necessary for the subject to write his/her description of the scenario.

Following the 15-minute interlude, the subject was requested to compose his/her description of the scenario. Each subject was given 20 minutes to complete the task and

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3. This was not merely a cover story for the purpose of introducing the distraction task. These norms were, in fact, being collected during the study for a graduate student in the Department of Psychology.

was requested to submit the written description to the experimenter at the end of this time limit.

During the next phase of the experiment, the subject was asked to provide a written explanation for the target actress' behavior at the end of the scenario, i.e., her exit from the lounge. Prior to the actual composition of the explanations, the experimenter presented a set of general explanation instructions. These instructions asked that the subject provide his/her impressions of why the target actress behaved as she did at the end of the scenario. The subject was instructed to communicate these impressions in a clear and concise fashion in order to insure the readability of the explanations since other students would read them.

The general observation, description, and explanation instructions were presented to all of the participants. In addition, the three experimental groups received the causal set instruction at appropriate points throughout the procedure. During the observation phase of the experiment, a subject assigned to the pre-observation condition received the general observation instructions plus the causal set instruction. Subjects assigned to the pre-description condition were presented with the causal set instruction in addition to the general description instructions at the beginning of the description phase and prior to the distraction task. And, finally, the causal set instruction and general explanation instructions were delivered to those subjects assigned to the pre-explanation condition immediately prior to the explanation phase of the experiment. The general observation, description, and explanation instructions are reproduced in Appendix E.

Upon completion of the explanation phase of the experiment, each subject was requested to complete a post-experimental questionnaire. Once finished, the subject was informed that the experiment was over. The experimenter then probed the subject for suspicion and demand awareness. After this the subject was fully debriefed. Any difficulties and/or comments the subject had regarding the experiment were solicited at this time. The subject was then given experimental credit for participation, thanked, and dismissed from the laboratory.

Dependent Variables

The primary dependent variables consisted of thirteen causal content categories in terms of which both the description and explanation protocols were scored. The subjects' description protocols were also scored for detail and accuracy. These variables and their measurement are described in more detail in the Content Analysis section below.

The post-experimental questionnaire contained 24 items. As previously mentioned, two items were designed to assess the extent to which the subjects believed that the target actress' behavior was influenced by internal and external causal factors. Subjects rated the influence of internal and external causes on separate 9-point scales, where 1 was labelled "had no effect" and 9 was labelled "had a very strong effect". Two other items measured the subjects' confidence in each of these ratings. The confidence ratings were made on two 9-point scales ranging from 1 (very uncertain) to 9 (very certain).

Subjects also responded on 9-point rating scales to six items designed to obtain their opinions of the degree of influence of several plausible internal and external causes (e.g., "How much influence did the document exert on the girl's behavior during the film?") and the extent to which the subjects thought about the target actress during their observation of the film. The actress' personality and mood were then evaluated by subjects on seven 9-point rating scales (e.g., angriness, thoughtfulness, aggressiveness).

The remaining seven items requested that the subjects recall various aspects of the videotaped scenario (e.g., "Did anyone leave the lounge?") to ensure that they had attended to the videotaped presentation. Subjects assigned to the pre-observation, pre-description, and pre-explanation conditions of the experiment were also asked to recall the causal set instruction which had been presented to them during the experimental session. This measure was included as a check on the efficacy of the causal set manipulation (see Appendix F for a copy of the post-experimental questionnaire).

CONTENT ANALYSIS

Four major questions guided the development of the content analytic procedures used to analyze and summarize the content of the description and explanation protocols quantitatively. The first question concerned the effects of the causal set instruction and distraction manipulation on the detail and accuracy with which subjects described the videotaped scenario. Attempts to answer this question involved the development of several measures of detail and accuracy.

The remaining three questions were concerned with extracting certain kinds of content from both the description and explanation protocols. The first of these questions asked if the amount of causal content within the description and explanation protocols would vary as a function of the time at which the causal set instruction was introduced and as a function of whether or not subjects were distracted from thinking about the causal set questions and/or the videotaped scenario. The second question focused on what kind(s) of causal references were included by subjects within their descriptions and explanations. An attempt was made here to assess whether or not the causal set instruction and distraction manipulation had any effects on the kind of causal content contained within the description and explanation protocols. The third question concerned the degree of correspondence between what were labeled as the free response attributions extracted from the description and explanation protocols and the internal and external attribution ratings offered by the subjects within their descriptions and explanations.

Two scoring procedures were developed in order to assess these four questions. The methods and procedures employed to transform the raw protocols and subsequently to score them are outlined in the following section(s).

Detail and Accuracy

Scoring preparation. For the purposes of determining the accuracy and detail of the protocols, the videotaped scenario was comprehensively described by the investigator in order to compare the subjects' descriptions of the scenario with a standard. The investigator partitioned the scenario into 19 independent scenes and then further subdivided it into 134 act segments. A scene was defined as a series of acts portraying an interaction (or set of interactions) between two or more target actors from the beginning to the end of the interaction(s). Each scene was composed of varying numbers of acts, depending upon the number of actors participating within a scene. Scenes were partitioned physically on the basis of major camera shifts (i.e., a shift from one camera to another). Acts were physically distinguished on the basis of the actor(s) on whom the camera assigned to the scene was focused. Each scene and its component acts were assigned numbers for scoring reference purposes (see Appendix A for a copy of the investigator's description of the scenario).

Development of the detail and accuracy measures. In order to assess whether or not the detail of the description protocols varied as a function of the distraction and causal set instruction manipulations, two measures of detail were obtained. A subjective overall measure of detail was obtained for each protocol on a 9-point rating scale, ranging from 1 ("not at all detailed") to 9 ("very detailed"), of the description protocol considered as a unit. An objective determination was also made of the number of investigator-defined scenes and acts mentioned by a subject within a description protocol. The degree of detail was specified as increasing with the total number of acts and scenes mentioned within a description protocol.

Two measures of accuracy were employed to assess the accuracy with which the subjects described the videotaped scenario. A rating of the overall accuracy of the protocol was made on a 9-point scale ranging from 1 ("very inaccurate") to 9 ("very accurate"). In addition, the accuracy of each of the 19 scenes was estimated. These estimates were offered on 4-point rating scales, where 1 was "very inaccurate" and 4 was "very accurate". If a scene was not mentioned by the subject, an individual accuracy rating was not offered and was scored as missing data.

Scoring procedure used for detail and accuracy. A female judge, blind to the nature of the experiment, was trained to score the description protocols on the dimensions of detail and accuracy. The master description of the scenario and a rating procedure instruction sheet were given to the judge. These instructions requested that the judge first familiarize herself with the master description of the scenario. The judge was given the entire set of description protocols in random order and instructed to rate them individually. Following this, the judge was instructed to determine which scenes and acts were mentioned by the subject. The judge recorded the assigned scene and act numbers on a rating sheet and continued with this procedure until the entire protocol had been scored on these dimensions.

Upon completion of these tasks, the judge proceeded to provide an overall accuracy rating of each scene description. The 19 ratings were recorded on the rating sheet. This phase of the scoring procedure continued until the 19 scenes had been scored for their individual accuracy.

After completion of the individual accuracy ratings, the judge rated the protocol on the scales measuring overall accuracy and detail. The judge was instructed that detail was determined by the number of scenes and component acts mentioned within a protocol, whereas accuracy was a function of the parallel between the investigator- and subject-generated descriptions of the scenario (see Appendix G for a copy of the rating procedure used for detail and accuracy).

The judge completed her ratings of a protocol by recording the subject designation on the rating sheet.

Causal Content

Scoring preparation. Subjects composed their descriptions of the scenario and explanations for the target actress' behavior in essay form. In order to facilitate the scoring of these raw protocols, each of them was typed in manuscript format. Each subject-defined sentence was assigned a number in preparation for scoring, because the subject-defined sentence was designated initially as the basic scoring unit.

In the process of scoring the protocols, however, major problems arose with using the subject-defined sentence as the scoring unit. It was found that individual differences in grammatical construction and in the use of the English language frequently obscured the judges' ratings of the protocol. Some subjects would employ simplex S-V-O constructions to express single ideas, while other subjects would construct very complex sentences expressing several ideas. The judges, when confronted with sentences of the latter type, would sometimes offer causal content ratings which, if the sentences were considered as a whole, would lead to conflicting interpretations of the sentence meaning. These problems led to a respecification of the basic scoring unit and to a subsequent restructuring of the protocols.

The protocols were thus restructured so that ratings of single ideas could be offered by the judges. The goal of the restructuring process was to extract the propositional content, or ideas, from the protocols. To extract this kind of content, single propositions were identified by partitioning each subject's protocol into simplex S-V-O constructions. These were formed by extracting the main verbs from the protocol and then identifying the verbs' corresponding subject and object. In the case of subordinate clauses, the relative pronouns were identified as the subject of the simplex sentence. Each protocol was restructured into this format, typed, and presented to the judges for scoring. Appendix H contains an example of an original and revised version of a description protocol.

Development of the causal content categories. An attempt was made to determine whether or not there would be quantitative and/or qualitative differences in causal content as a function of the time at which the causal set instruction was introduced. In order to assess this possibility, a procedure was developed which distinguished quantitatively between content which was believed to be relevant and content which was believed to be irrelevant to answering the causal set questions and qualitatively among different kinds of causally relevant content. The development of the procedure was guided by a simultaneous consideration of the possible answers to the four causal set questions and the nature of the videotape scenario.

The early stages of the development of the causal content scoring procedure required that the investigator define a fairly exhaustive set of categories within which the various kinds of subject-generated content could be classified. The investigator constructed an initial list of categories which seemed to be representative of the kinds of information subjects might mention within their description and explanation protocols. After the construction of the initial category list, the investigator read the entire set of untransformed description and explanation protocols to determine how adequately the list represented their content.

This review indicated that the initial category listing was sufficiently representative of the protocol content to warrant using it to score the transformed protocols.

Several modifications of the initial category listing were undertaken due to problems which arose during the scoring phase of the investigation. Three categories, i.e., (1) whether or not reference was made to what the subject thought of the actress' actions or personality, and how explicitly (2) internal and (3) external the causal content of the concept was, were omitted from the content analytic procedure because of inter- and intra-judge rating inconsistency. Furthermore, the categories indexing the *amount* of internal and external causality referred to within a concept was changed to ratings of these references in terms of internal and external causal *emphasis*, i.e., a change from a quantitative to a qualitative index. And, finally, one other category was included within the modified category listing, i.e., references to what immediate or past situational/environmental/external factors could have triggered the final actions of the actress. The final causal content categories are listed and described in Appendix I.

Scoring procedure used for causal content ratings. Three female judges (the investigator and two others blind to the purpose of the experiment) were trained to rate the description and explanation protocols in terms of the causal content categories. The training procedure employed involved familiarizing the judges with the content of the raw protocols and then instructing them as to how to interpret the raw content in terms of the categories of causal content. No constraints were placed on the judges' estimates of the frequency with which a given category was mentioned. A constraint was placed on the judges' internal-external attribution ratings. That is, judges were instructed to enforce a negative correlation (or, inverse relationship) between their internal and external ratings. Each judge was given a set of rating procedure instructions, which told them of the general nature of the rating task, listed and defined the causal content categories, and indicated how their ratings were to be summarized numerically. The rating procedure instructions are presented in Appendix I.

Each judge rated the same set of eighteen raw protocols (nine description and nine explanation). Following the completion of these ratings, the investigator examined the degree of interjudge reliability on each of the dimensions of causal content. It was found that reliability was fairly low on some of the categories. Because of this, the investigator met with the judges (individually and as a group) to discuss any potential ambiguities with the rating procedure instructions. Observations were made within these meetings that several of the content category definitions were vague and, moreover, that there was not an appreciable incidence of certain kinds of causally relevant information within the protocols (e.g., evaluative references). Modifications were made at this time to the rating procedure to eliminate the ambiguities.

Following these modifications, the judges were given the first set of eighteen protocols and another set of thirteen protocols (six description and seven explanation) to rate in terms of the modified version of the rating procedure. Upon completion of these ratings, interjudge reliability was examined for the second time. It was again found that interjudge reliability did not achieve the desired level (.60) on several of the categories of causal content.

This finding was attributed both to the data analytic method employed to assess reliability as well as to ambiguities within the rating procedure instructions. To check on the latter possibility, the investigator made judge-by-judge comparisons of the rated protocols. It was found that there was higher actual rating agreement than indicated by the statistical analyses of these ratings. There were, however, some rating discrepancies among the three judges. To avoid further rating discrepancies, the investigator requested that each judge examine the obtained discrepancies and consider why they might have arisen. In effect, each judge re-examined her rating of the 31 protocols and compared these ratings with those of the other two judges. Judges were asked to change their previous ratings if it was felt that a change was warranted. Interjudge reliability on this set of ratings was then assessed. This assessment indicated that interjudge reliability met the desired criterion on all but two of the causal content categories.

Upon completion of this set of ratings, each judge was given a final set of protocols for scoring. Each judge rated a different set of 43 protocols (22 description and 21 explanation) randomly selected from the remaining pool of raw protocols, with the restriction that each judge received the same number of protocols from each experimental condition. Judges remained blind to the subject's condition assignment until the protocol had been rated.

RESULTS

Manipulation Check

Subjects exposed to the causal set instructions were asked to recall the causal set questions. All subjects correctly recalled the four major questions; there were no significant effects of either the causal set instruction or the distraction manipulations on their recall. The efficacy of the distraction manipulation was not assessed independently of the detail, accuracy, and causal content protocol analyses.

Assessment of Interjudge Reliability

Before presenting the major results of the study, it is necessary to demonstrate the reliability of the causal content ratings. The desired level of interjudge reliability was set at .60 for each of the causal content categories. Several Pearson product-moment correlation analyses were conducted to determine if this criterion was achieved for each of the categories of causal content. In addition to these analyses, the judges' overall ratings of the influence of internal and external causality were compared for their reliability.

In general, the results of these analyses revealed satisfactory levels of interjudge reliability within each of the examined categories. However, it was found that the reliability coefficients varied, sometimes considerably, with the unit of analysis employed to assess reliability and with the judges' experience with the scoring procedure.

Appendix J describes the two methods of analysis employed to assess interjudge reliability. Appendix K documents the changes in interjudge reliability for each of the causal content categories examined as a function of the two methods of analysis employed as well as the judges' experience with the scoring procedure.

Examination of reliability changes as a function of training reveals that interjudge reliability progressively increased (or remained at relatively the same level) on all but one of the causal content categories. The desired level was never attained for one of the dimensions, i.e., the overall rating of external causality, despite repeated training on this dimension.

It is important to note that the relatively high interjudge reliability coefficients obtained from the final set of analyses are, in part, due to the fact that the last training session required the judges to examine and explain deviations in their ratings of the training protocols. Conducting the final training session in this manner may have artificially inflated these correlations. If one examines the reliability coefficients resulting from the corrected analysis of the second set of ratings, however, it is apparent that interjudge reliability still exceeded the desired level on all but three of these dimensions, i.e., ratings of reference to consensus information, overall rating of the protocol in terms of internal causal influences, and again, the judges' overall rating of external causal influences.

Recall

Detail. Several analyses were conducted to determine whether the detail with which subjects described the scenario was significantly affected by the time at which the causal set instruction was introduced and/or by the distraction manipulation. Each of the description protocols was rated on five dimensions of detail. Table 1 presents the results of the analysis of variance conducted on the scores for one of the measures of detail, viz., the average number of actions mentioned.[4] As shown in the table, significant main effects of causal set, $F\ (3,77) = 4.25$, $p < .008$, and distraction, $F\ (1,77) = 3.93$, $p < .05$, obtained on this measure.

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[4] Neither of the manipulated independent variables had any significant effects on the subjects' scores on three of the detail measures, i.e., the total number of scenes mentioned, the overall ratings of detail, and the total number of concepts contained within the subjects' descriptions. The total number of actions mentioned was the fourth measure of detail and yielded results identical to the ones presented within the text.

Table 2 presents the mean number of actions within each of the eight experimental conditions. An examination of the mean scores obtained on this item indicates that subjects who were distracted included more action descriptions than subjects not so distracted and, moreover, those subjects exposed to the causal set instructions immediately prior to the description phase of the experiment (i.e., pre-description condition) included significantly fewer action references than subjects in the remaining three causal set instruction conditions at both levels of distraction (p < .05, by Duncan's multiple range test).

Accuracy. Each description protocol was scored for the accuracy with which the subject described the entire scenario. The analysis of these scores indicated that only the distraction manipulation had even a marginally significant effect on the accuracy of the subjects' descriptions, F (1,77) = 3.60, p < .06. No other effects approached this level of significance.

Table 3 presents the mean accuracy scores obtained by subjects within each of the eight experimental conditions. These scores indicate that subjects who were given the distraction task provided more accurate descriptions of the scenario than did those subjects not distracted by the interpolated task. Table 3 also indicates that the subjects assigned to the pre-description condition tended to provide the least accurate descriptions when compared to the descriptions of the remaining subjects. This finding parallels the findings reported with regard to descriptive detail. No other consistent trends are observable in these data. [5]

Causal Content

Each of the concepts designated by the judges as containing causal content was rated by them in terms of the categories of causal content. Ratings were assigned to the causally relevant concepts contained within both the description and explanation protocols in accordance with the content analytic procedure. Total scores were then computed for each of these categories. Unless otherwise specified, these total scores were obtained by forming a ratio between the number of references made by a subject to a given category (the numerator) and the total number of causally relevant concepts contained within the subject's description or explanation protocol (the denominator). The results of the analysis conducted on the causal content ratings of the description and explanation protocols are presented in the following sections.

Description. Subjects assigned to the pre-observation and pre-description conditions were asked to consider what the actress' intentions were for behaving as she did within the scenario prior to the composition of their descriptions. (The subjects assigned to the pre-explanation condition were not explicitly requested to consider intentionality until after the description phase of the experiment.) One of the causal content categories was developed to assess the number of references made by subjects to the intentionality question. An analysis of variance was conducted on the number of references made to behavioral intention information relative to the total number of causally relevant concepts. The results of this analysis revealed a significant interaction between the causal set instruction and distraction variables, F (3,49) = 3.80, $p < .03$. No other effects were significant.

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[5] A second and final assessment of accuracy was made. Each scene was individually rated for accuracy. The total number of scenes receiving an "accurate" rating were compiled and corrected for the total number of scenes mentioned by the subject. The analysis of variance conducted on the corrected scores did not reveal any additional significant effects.

Table 4 presents the mean scores on the behavioral intention item within each of the eight experimental conditions. These scores indicate that, at both levels of distraction, the pre-explanation and control subjects included approximately the same number of references to behavioral intention information. The pre-observation and pre-description subjects, however, included significantly more references to intentions than subjects in the remaining two conditions ($p < .05$, Duncan's multiple range test. An examination of the scores obtained by the pre-observation and pre-description subjects, moreover, reveals a simple interaction ($p < .05$) within each of the two distraction conditions. The pre-observation subjects, when not distracted, made many more references to intentionality than did their counterparts who were required to complete the distraction task. The subjects assigned to the pre-description conditions of the experiment, however, performed in the opposite fashion. When required to complete the distraction task, they included many more references to intentionality than did their nondistracted counterparts.

The pre-observation and pre-description subjects were also asked to consider what kinds of situational characteristics could have influenced the target actress' behavior prior to the description phase of the experiment. Each description protocol was scored for the number of references made to situational influences. An analysis of variance conducted on these scores revealed two significant interactions, one between sex and distraction, F (1,49) = 4.89, $p < .03$, and another between the causal set instruction and distraction, F (3,49) =2.77, $p < .05$. No other effects were significant. Table 5a presents the mean scores obtained on this item, partitioned by sex and distraction. The distraction manipulation apparently had no effect on the number of references made by female subjects to possible external causes, whereas male subjects included approximately four times as many references to external causes when they were not distracted than when they were distracted.

Table 5b presents the mean number of references made by subjects to possible external causes, partitioned by causal set and distraction. The interaction between the causal set instruction and distraction variables exhibits the same reversal of mean scores reported earlier with respect to the analyses of accuracy and detail. That is, subjects within the pre-observation/distraction condition included fewer references to external causality than did their nondistracted counterparts, whereas the pre-description/no distraction subjects included fewer references to external causality than subjects assigned to the pre-description/distraction condition. A similar, but weaker, relationship exists for the pre-explanation and control conditions as a function of the distraction manipulation. The pre-observation and pre-description subjects made significantly more references to possible external causes of the target actress' behavior than subjects in the pre-explanation and control conditions ($p < .05$, Duncan's multiple range).

Two final questions guided the pre-observation and pre-description subjects' consideration of the scenario. They were asked to consider how consistent the target actress' behavior seemed to be within the scenario (i.e., consistency information) and whether or not other people would have responded as she did to the situation (i.e., consensus information). Two of the causal content categories were designed to provide an index of the number of references made by subjects to these two dimensions.

Analyses of variance were conducted on the mean scores on these categories to determine whether or not the scores varied as a function of the causal set instruction, distraction, and sex variables. The analysis conducted on the consistency scores indicated that none of these factors had any significant effects on the number of consistency references. Table 6 presents the mean scores within each causal set condition on this dimension. However, an examination of these scores indicates that those within the pre-observation and pre-description conditions tended to include more references to consistency information than subjects assigned to the other conditions.

The analysis of variance conducted on the consensus data did reveal a significant interaction between the causal set instruction and distraction variables, $F (3,49) = 2.79$, $p < .05$. No other effects in this analysis were significant. Table 7 lists the mean number of references made by subjects to consensus information, within each of the eight experimental conditions. Those subjects assigned to the pre-observation/distraction condition made fewer references to consensus information than did their nondistracted counterparts ($p < .05$ using Duncan's multiple range). The responses of the subjects assigned to the pre-description conditions, however, did not manifest this pattern. Those subjects in the distraction condition made many more references to consensus information than did those subjects assigned to the no distraction condition ($p < .05$, Duncan's multiple range). This result is consistent with those reported earlier in the presentation of the detail, accuracy, and causal content results.

There were no significant differences among the eight conditions in terms of the total number of concepts contained within the description protocols, with the exception of a main effect of sex, $F(1,49) = 9.10$, $p < 004$. This result suggests that the absolute amount of content did not vary either as a function of the time at which the causal set instruction was introduced or as a function of participation (or nonparticipation) in the distraction task. One subsequent analysis was conducted to determine whether or not the overall amount of causal content within the description protocols varied as a function of the manipulated independent variables.

For this analysis, the ratio of the number of causally relevant concepts to the total number of concepts within each subject's description protocol was examined. The analysis of variance conducted on these scores revealed a significant main effect of the causal set instruction factor, F (3,49) = 5.81, $p < .002$. As shown in Table 8, subjects within the pre-observation and pre-description conditions included more causal content relative to the total amount of content within their descriptions than did subjects in the pre-explanation and control conditions ($p <$ .05, by Duncan's multiple range test).

The description and explanation protocols were also scored in terms of six categories of causal content which were not included within the causal set instruction. The six categories were: (1) the number of references to the dispositional characteristics of the actress, (2) the number of references to the actress' mood states; ratings of the extent to which a referenced mood state was (3) internally and (4) externally caused; ratings of the extent to which (5) internal and (6) external causality were emphasized within each of the designated causally relevant concepts.

Separate analyses of variance were conducted on the scores derived from the judges' ratings of the protocols in terms of each of these categories. Of the six analyses, only two revealed significant effects of the causal set instruction and/or the distraction variables. An analysis of the judges' ratings of the internal causal emphasis within the individual concept revealed a significant main effect of the causal set instruction, $\underline{F}$ (3,49) = 3.95, $\underline{p} < .01$. Table 9 presents the mean scores obtained on this category within each of the eight experimental conditions. Subjects exposed to the causal set instruction at some time prior to the completion of their descriptions (i.e., the pre-observation and pre-description conditions) placed more emphasis on internal causality than subjects within the pre-explanation or control conditions ($\underline{p} < .05$, Duncan's multiple range).

The external counterpart to this item, i.e., external causal emphasis within the individual concept, although yielding no significant main effect of causal set, did result in a pattern of means mirroring the mean scores obtained on the internal emphasis item. The means for the pre-observation, pre-description, pre-explanation, and control conditions are 1.04, .80, 1.14, and 1.02, respectively (a rating of "4" reflected the greatest amount of emphasis).

A significant interaction between the causal set instruction and distraction variables was obtained in the analysis of the mean number of references to the actress' mood states, $\underline{F}$ (1,49) = 4.18, $\underline{p} < .05$. As shown in Table 10, subjects within the pre-observation/no distraction condition and pre-description/distraction condition made more references to the various mood states of the actress than did subjects in any of the other conditions. The significant causal set instruction by distraction interaction is mainly accounted for by the scores of the subjects in the experimental groups appropriate to the description task. Subjects in the pre-observation/distraction condition included very few references to mood relative to their nondistracted counterparts. Subjects within the two pre-description conditions performed in the opposite manner.

Attention was also paid to the attempts made by subjects to locate the immediate source of the referent mood state within internal and external causes. The analyses conducted on the scores for these two categories revealed no significant effects of any of the manipulated variables.

Explanation. The explanation protocols were scored in terms of the same causal content categories as were the description protocols.

Subjects assigned to the pre-explanation condition were encouraged to think about the target actress' behavioral intentions by exposure to the causal set instruction just before their explanations were composed. Each explanation protocol was scored for the number of references made to behavioral intention information relative to the total amount of information (i.e., total number of concepts) contained within their explanations. The analysis conducted on these scores resulted in a significant main effect of the causal set instruction only, $F(3,52) = 4.36$, $p < .05$.

Table 11 presents the mean scores obtained on this item by subjects within each of the causal set conditions. More references to the target actress' behavioral intentions were made by pre-explanation subjects than by subjects in the remaining experimental conditions ($p < .05$, Duncan's multiple range). No other trends were observed in these data.

The pre-explanation group was also explicitly asked, by exposure to the causal set instruction, to consider what possible external causes could have influenced the actress' behavior. The analysis conducted on mean scores for this dimension did not reveal any significant effects of the causal set instruction or distraction factors, unlike the results reported for a similar analysis of the description data.

The pre-explanation subjects were requested to consider two other causal set questions immediately prior to the composition of their explanations, viz., the perceived consistency of the target actress' behavior, and the extent to which others, confronted with a similar situation, would have responded as the target actress did (consensus information). An analysis of variance conducted on the consistency scores revealed a significant main effect of the causal set manipulation, $F(3,73) = 3.07$, $p < .03$. No other effects were significant.

Table 12 lists the mean number of consistency references made by subjects, partitioned by experimental condition. Subjects in the pre-explanation condition included more references to consistency information than did subjects in any of the other experimental conditions ($p < .05$, Duncan's multiple range).

The analysis of variance conducted on the scores obtained by subjects on the consensus dimension revealed no significant effects of the causal set instruction, distraction, or sex factors. These results are inconsistent with the results obtained from the analysis of the consensus and consistency scores assigned to the description protocols.

Several attempts were made to assess whether or not the amount and kind cf content included by subjects within their descriptions and their explanations differed as a function of the causal set, distraction, and sex factors. The results of these analyses revealed no significant effects of these factors on either the total amount of content (both causally relevant and causally irrelevant) or the total amount of causally relevant content included by subjects within each type of protocol.

Two repeated measures analyses of variance, using the type of protocol as the within subjects factor, of the total number of concepts and total number of causally relevant concepts each revealed a significant main effect of the protocol type, $F\ (1.64) = 142.2$, $p < .001$ for the analysis of total number of concepts and, $F\ (1,64) = 39.41$, $p < .001$ for the analysis of total number of causally relevant concepts. As shown in Table 13, the length of the protocols decreased whereas as the number of causally relevant concepts increased proceeding from description to explanation. Interestingly, the pre-explanation subjects included proportionally fewer references to causally relevant information within their explanations than subjects within the remaining two causal set conditions ($p < .05$, Duncan's multiple range). A specific comparison indicated that the pre-explanation subjects included significantly more concepts within their explanations than did the remaining subjects ($p < .05$, Duncan's multiple range).

The explanation protocols were also scored in terms of the six remaining causal content categories. Of the six separate analyses conducted, three revealed significant effects of the causal set instruction and/or distraction variables. Nonsignificant results were obtained on the following three dimensions: the ratings of the extent to which a referenced mood was (1) internally and (2) externally caused, and (3) the ratings of the extent to which external causality was emphasized within each of the concepts designated as containing causally relevant information.

The analysis conducted on the number of references made to the actress' mood states revealed a significant main effect of the causal set instruction, $F\ (3,73) = 4.50$, $p < .05$. Table 14 presents the mean number of references made by subjects within each of the eight experimental conditions to the mood states of the actress. As seen in the table, subjects exposed to the causal set instruction immediately prior to the composition of their explanations included many more references to the actress' mood states than the subjects in the remaining conditions ($p < .05$, Duncan's multiple range).

A significant main effect of the causal set instruction was also obtained within an analysis of the scores of subjects on the reference to the actress' dispositional characteristics item, F (3,73) = 3.36, $p < .02$. Table 15 indicates that subjects assigned to the pre-explanation condition included more references to the actress' dispositions than did subjects in the remaining conditions ($p < .05$, Duncan's multiple range).

Finally, an analysis conducted on the judges' ratings of the internal causal emphasis revealed a significant interaction between the causal set instruction and sex factors, F (3,51) = 2.96, $p < .04$. Table 16 presents the mean scores obtained on this item, partitioned by the causal set condition and sex. In general, subjects tended to place little emphasis on internal causality. Furthermore, even though a significant sex by causal set interaction obtained, no interpretable response pattern in these data could be discerned.

Comparison between description and explanation. 2 X 2 X 4 repeated measures analyses of variance , with type of protocol as the repeated measure, were conducted on the scores assigned to description and explanation for the eleven measures of causal content and the single measure of total amount of content. A significant main effect of type of protocol was obtained on all but two measures (i.e., the number of consensus references and the amount of external causal emphasis within-each-concept). As shown in Table 17, the number of references to intentions, dispositions, external causes, mood, consistency, and the total number of causally relevant concepts as well as the amount of emphasis placed on internal and external causes of mood, internal and external attribution, and the amount of internal causal emphasis within-each-concept were always significantly greater in the explanation protocols. The description protocols, however, contained significantly more concepts than did the explanation protocols.

Significant two-way interactions between causal set and protocol type were obtained on the disposition measure, $\underline{F}$ (3,56) = 5.28, $\underline{p} < .003$, and the overall measure of internal attribution, $\underline{F}$ (3,56) = 3.14, $\underline{p} < .03$. Tables 18 and 19 display the means obtained on the disposition and internal attribution measures, respectively, partitioned by causal set and type of protocol.

As shown in Table 18, subjects assigned to the pre-observation, pre-explanation, and control conditions made significantly more references to the dispositional characteristics of the actress within their explanations than they did within their descriptions. There was no significant difference between description and explanation in terms of the number of dispositional references made by the pre-description subjects.

Table 19 shows that the judge-derived ratings of internal attribution from description and explanation did not differ significantly in the pre-description condition, whereas a significant change toward greater emphasis on internal causes from description-to-explanation was found for ratings derived from the protocols of the pre-observation, pre-explanation, and control subjects; the control condition exhibited the greatest amount of change.

The relationship between the content of the description and explanation data was also examined using several Pearson product-moment correlation analyses. Correlations were computed between the scores assigned to each causal content and total content dimension for description and explanation. Table 20 shows the obtained intradimensional correlations and their probaility values, collapsed across causal set and distraction condition assignment. Significant correlations resulted between description and explanation for the intent and external causality dimensions of focused causal content and for the mood dimension of unfocused causal content.[6]

Intradimensional correlations were also computed within each of the eight major conditions due to the fact that significant main effects of and interactions between causal set and distraction were obtained on several of the dimensions. These correlations are displayed in Table 21.

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6 The intentionality, external causality, consistency, and consensus dimensions will be referred to as focused dimensions of causal content, because they were referenced in the causal set instruction. The mood, dispositional, internal-external causes of mood, and internal-external causal emphases within-each-concept dimensions will be referred to as unfocused dimensions of causal content, because they were not referenced within the causal set instruction.

The pre-description/distraction condition yielded the most consistent pattern of high-positive intradimensional correlations for the intention, external causes, disposition, and mood dimensions, as a whole. A very weak negative relationship is observed to exist between the number of references to consistency and consensus information in description and explanation as well as the internal and external attributions derived from these protocols.

Causal Attribution

Several measures of the subjects' beliefs regarding the possible causes of the actress' behavior were included in this investigation. Two of these measures appeared on the post-experimental questionnaire in the form of 9-point rating scales indexing the extent to which the subjects perceived the actress' behavior to be influenced by internal and external causal factors. In addition to these ratings, the three judges (who were assigned the task of rating the description and explanation protocols along the dimensions of causal content) were also required to evaluate each protocol in terms of the extent to which the content of the protocol located the causal source of the actress' behavior within internal and external factors. The judges made their ratings on two 9-point scales identical to those presented to the subjects on the post-experimental questionnaire. Each judge offered a rating of internal and external causal influence for the description and explanation protocols.

Thus, a total of six attributional indices were taken for each subject.

An analysis conducted on the post-experimental questionnaire attribution items revealed no significant effects of the causal set instruction or distraction factors on the subjects' perceptions of the influence of either internal or external causal factors. The means, collapsed across the eight conditions, for the internal and external rating scale items (where 1 was "had no effect" and 9 was "had a very strong effect") were 7.26 and 6.54, respectively. The range of scores for these items, across the experimental conditions, were from 7.00 to 7.80 for the subjects' ratings of internal causal influences, and from 6.70 to 7.40 for the subjects' ratings of external causal influences. Thus, subjects, regardless of their assigned conditions, appeared to believe that both internal and external causes affected the actress' behavior to a great degree.

A somewhat different picture emerges in considering the judge asigned ratings of internal (or external) causal influence. The analysis of the judges' internal causality ratings based on the description protocols revealed significant main effects for sex, F (1,31) = 4.36, $p < .05$ and the causal set instruction factors, F (3,31) = 2.89, $p < .05$. A similar analysis conducted on the judges' ratings of external attribution also revealed significant main effects of sex, F (1,31) = 4.17, $p < .05$, and the causal set instruction factor, F (3,31) = 2.99, $p < .05$.

Tables 22a and 22b present the mean scores obtained on these items, partitioned by causal set and sex, respectively. As shown in Table 22a higher internal attribution ($\underline{p} < .05$) ratings and lower external attribution ($\underline{p} < .05$) ratings were derived from the pre-description and control subjects' descriptions than were derived from the descriptions of the pre-observation and pre-explanation subjects ($\underline{p} < .05$, Duncan's multiple range). Table 22b indicates that higher internal and external attribution ratings were derived from the females' protocols than were derived from the males' protocols.

It is important to observe that the judges' causal ratings were based upon the informational content of the protocols. If a judge believed that there was insufficient information upon which to base the attributional rating, she was instructed to forego the rating. An examination of the number of ratings (i.e., subjects) upon which the analyses were conducted indicates that judges were apparently unable to offer internal and external causal ratings for 50% of the control subjects' description protocols, 25% of the pre-observation and pre-explanation description protocols. Yet, every pre-description protocol received the causal ratings. This result nicely corresponds with those reported in the last paragraph; that is, only those subjects who distinguished between internal and external attributions in their ratings composed protocols from which causal attributions could be consistently derived. Judges were requested to verbalize the reasons for their inability to rate some of the protocols in terms of internal and external causality. Their comments indicated that there was, indeed, insufficient causally relevant content upon which to base their ratings.

The explanation protocols were also scored in terms of the degree to which internal and external causality were emphasized. An analysis conducted on the mean scores obtained from the external causal ratings revealed no significant effects of the causal set instruction, distraction, or sex factors. A significant three-way interaction was obtained, however, among the causal set instruction, distraction, and sex factors from the analysis conducted on the ratings of internal causality, $\underline{F}$ (3,50) = 2.50, $\underline{p} < .07$.

Table 23 presents the mean internal attribution scores obtained by subjects as a function of these factors. Lower internal attribution ratings were derived from the pre-explanation subjects' protocols at both levels of distraction ($\underline{p} < .05$, Duncan's multiple range). Female subjects, when distracted, placed less emphasis on internal causes than did their male counterparts, whereas the non-distracted females placed more emphasis on internal causes than the non-distracted males, except in the pre-explanation condition.

Relationship Between the Two Measures of Attribution

The relationship between the subject-completed ratings of internal and external causality and the causal attribution ratings made by the judges on the basis of the content of the description and explanation protocols was assessed by several Pearson product-moment correlation analyses. The results of these analyses are presented in the following section.

Descriptions. The internal and external causal influence ratings made by the subjects and by the judges were compared to determine the relationship between these measures. The overall correlation between the two sets of internal attribution ratings, ignoring the condition assignments of subjects, was low and positive, $r(61) = .22$, $p < .08$. It should be recalled, however, that significant main effects of the causal set instruction and sex factors emerged from the analysis of variance conducted on the judges' internal causality ratings of the description protocols. Because of the significant main effect of the causal set instruction, several analyses correlating the subjects' and judges' internal attribution ratings within each of the eight experimental conditions were conducted.[7]

Table 24 presents the results of the correlational analyses conducted on the various pairs of attributional ratings, partitioned by experimental condition and comparison. The correlation between the subjects' and judges' internal attribution ratings ranged from -.69 (control/distraction condition) to +.65 (pre-description/distraction condition). The latter correlation was the only significant ($p < .03$) one obtained within these analyses. In general, it would appear that the subjects' and judges' internal attribution ratings are not very highly related.

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[7] There were too few males and females within each of the eight experimental conditions to warrant comparisons at the sex level.

An even weaker relationship appears to exist between the subject- and judge-generated ratings of external causal influence. The overall correlation between these two measures, ignoring the causal set instruction and distraction condition assignment, was essentially zero ($r = -.03$). Here again, however, the significant main effect of the causal set instruction obtained from the analysis of variance conducted on the judges' ratings of external causality warranted examinations of the correlations within each of the experimental conditions. Table 24 indicates that the correlation coefficients ranged from -.31 (pre-description/ distraction condition) to +.28 (pre-observation/no distraction condition). None of these correlations were significant. It would again appear that the judge-generated and subject-generated measures of attribution are not very highly related. Judges apparently enforced a high negative correlation between internal and external attribution whereas the subjects did not treat the scales in this manner.

Several attempts were also made to determine the nature and magnitude of the relationship between the two measures of attribution. The overall correlational analysis conducted, comparing the judge-generated ratings of internal and external causal influence, revealed a highly significant and negative correlation between these two sets of ratings, $r(62) = -.99$, $p < .001$.

A closer examination of the correlations between the judges' internal and external causal ratings within each of the eight experimental conditions finds that the correlations range from -1.00 (pre-description/no distraction, pre-explanation/no distraction, and control/no distraction conditions) to -.98 (pre-observation/no distraction condition). All of these correlations are significant at the .001 level. These results suggest that the judges were consistently successful in enforcing the desired inverse relationship between internal and external causal attribution.

An examination of the correlation between the subjects' internal and external attribution ratings was also undertaken. The overall correlation obtained between these two sets of ratings was positive, but low, $r(80) = +.31$, $p < .007$. Although no significant effects of the causal set instruction or distraction factors were found in the analysis of variance conducted on the subjects' internal and external causal ratings, correlations between these ratings were computed within each of the experimental conditions.

Table 24 indicates that the correlations ranged from +.12 (pre-explanation/distraction condition) to +.52 (pre observation/no distraction condition). Unlike the results reported above, all of these correlations were positive, and none of them approached significance. In contrast to the apparently high negative relationship between the judge-generated ratings of internal and external causality, there appears to be a positive relationship between the subjects' ratings of these causal influences. This latter result suggests that the subjects perceived the two causal factors as capable of independently influencing the actress' behavior.

Explanations. Similar correlational analyses were conducted comparing the judges' ratings of internal (or external) causality based on their assessment of the explanation protocols with the internal and external attributional ratings offered by the subjects. The relationships between the internal and external attributional ratings obtained within each of these measures were also examined. The analysis conducted to determine the overall correlation between the judge- and subject-generated ratings of internal causality resulted in a low, positive correlation, $r(76) = +.29$, $p < .01$. Because of the fact that a significant three-way interaction between the causal set instruction, distraction, and sex factors obtained in the analysis conducted on the judge-generated ratings of internal causality, separate correlations were computed between the judges' and subjects' ratings of internal causality within each of the eight experimental conditions.

Table 25 presents the results of the correlational analyses conducted to examine the stated relationships, partitioned by experimental condition and the comparison of interest. The correlations ranged from -.02 (control/no distraction condition) to +.77 (pre-explanation/no distraction condition). The latter correlation was the only one which reached significance. Although the overall correlation between the two indices of internal attribution measures reached significance, the general trend of results suggests that they are not related.

The analyses comparing the judge- and subject-generated ratings of external causality revealed a similar pattern of results. The overall correlation between these two sets of ratings was quite low, $r(76) = +.04$, $p < .74$. Further breakdowns in terms of assigned experimental condition resulted in correlations ranging from -.43 (pre-observation distraction condition) to +.70 (control/distraction condition). Table 25 presents the results of these analyses. None of the correlations approached the desired significance level; there is no consistent trend in these results. As with the same comparisons presented for the description data, it would appear that the two sets of external causality ratings are not related.

The judges' explanation protocol ratings of internal and external causality were correlated in order to assess the magnitude and nature of the relationship between these ratings. The overall correlational analysis, ignoring causal set instruction and distraction condition assignment, resulted in a high, negative correlation between these ratings, $r(78) = -.68$, $p < .001$. An examination of the correlations resulting between the internal-external ratings within each experimental condition makes it apparent that the correlations are generally are quite high and negative.

These results are consistent with those reported above with respect to the internal-external ratings made by judges on the basis of the description protocols.

DISCUSSION

The present study attempted to answer the six questions outlined in the introduction, all of which were either directly or indirectly concerned with the issues of information selection and information relevance in causal attribution. An attempt was first made to determine whether or not distraction and variations of the time at which the goal of causal evaluation was introduced would differentially affect (a) the amount and kind of information recalled about an observed target event and (b) subsequent causal attributions for this event. In addition, an attempt was made to develop a viable content analytic procedure for the identification and classification of causally relevant information within the subject-generated text as well as to compare the causally relevant information identified by this procedure with the responses made by participants to more traditional measures of causal attribution. The discussion will focus on the relationship between the results obtained and the questions asked as well as on the advantages and disadvantages of using protocol analysis in attribution research. A summary of the results is included below in order to facilitate a clearer understanding of the discussion.

Summary of the Results.

Information selection. The results of the analyses of the description data indicated that information selection, at least as indexed by written recall, differed as a function of the time at which the causal set instruction was introduced. Although the total amount of content did not differ significantly among the four causal set instruction conditions, the pre-observation and pre-description groups made significantly more references to intentionality, external causality, consensus, and mood information than did subjects in the pre-explanation and control conditions. No significant differences emerged among the four causal set conditions in terms of the number of references to the consistency dimension (a focused category of causal content) and four of the six unfocused causal content dimensions (i.e., dispositional references, internal or external causes of mood, and external causal emphasis within each concept). In general, the pre-observation and pre-description subjects made significantly more references to causally relevant information within their descriptions than did the pre-explanation and control subjects.

Although the causal set and distraction factors separately affected the kind and amount of content included by subjects within their descriptions, the most consistent effect across the dimensions of causal content was a significant causal set-by-distraction interaction. The responses of the distracted and nondistracted pre-observation and pre-description subjects mainly accounted for this interaction. The pre-observation/no distraction participants consistently included more references to the relevant dimensions than did their distracted counterparts. The pre-description/distraction participants, on the other hand, consistently included more references to the target dimension than did their nondistracted counterparts.

The detail of the descriptions differed significantly both as a function of causal set and distraction. Distracted participants were more detailed in their descriptions than were nondistracted participants. The pre-description subjects were significantly less detailed than were the pre-observation, pre-explanation, and control subjects. The accuracy of description varied only marginally as a function of causal set and distraction. Pre-description subjects tended to be less accurate than subjects in the remaining conditions. Interestingly, the distracted participants tended to provide more accurate descriptions than did the nondistracted participants ($p < .05$).

Analyses of the explanation data also partially confirmed the effectiveness of the causal set and distraction manipulations in producing information selection differences. The pre-explanation subjects included significantly more references to intention, consistency, mood, and disposition information than did subjects in the remaining three causal set conditions. No significant differences emerged as a function of the causal set manipulation on two of the focused dimensions (external causality and consensus) and on three of the unfocused dimensions (external causal emphasis within-each-concept and internal-external causes of mood). Relatively speaking, however, the pre-explanation subjects included fewer causally relevant concepts within their explanations than did the remaining subjects. This result is due to the fact that the pre-explanation subjects included more concepts overall than did the other participants.

The distraction manipulation had minimal effects on the amount of causally relevant content included by subjects within their explanation protocols.

Information relevance. Although references were made to the focused dimensions of causal content by the pre-observation and pre-description subjects within their descriptions and by the pre-explanation subjects within their explanations, more references were usually made by these subjects to the unfocused dimensions of causal content in both the descriptions and explanations. Similarly, very few references were made by the control group to the focused dimensions within their descriptions and within their explanations; more references were usually made by this group to the unfocused dimensions within these protocols.

Parallelism between description and explanation. More references were made to both the focused and unfocused causal content categories within explanation than within description (except for the consensus and external causal emphasis categories). Moreover, very few significant intradimensional correlations resulted between the number of references made to any one given focused dimension of causally relevant content within description and explanation. In comparison, significant intradimensional correlations resulted betwen the number of references made to the unfocused dimensions of causally relevant content within the descriptions and explanations. Of the six unfocused dimensions where frequency was the unit of measurement, two of these (mood and disposition) appeared with a high frequency within both description and explanation.

Attribution. Only the internal and external attributions made by subjects assigned to the pre-description and control conditions differed as a function of the causal set manipulation. Subjects in the remaining causal set conditions made similar high internal and high external attributions. The judge-derived ratings of internal and external attribution from the description protocols differed as a function of the causal set manipulation, but for the pre-description and control subjects only. Only the judge-derived internal attributions from the explanation protocols differed as a function of causal set and distraction. Overall, on the derived measures of attribution, participants made stronger attributions to internal relative to external causes.

In comparing the ratings of judges with those of subjects, a very inconsistent pattern of correlations emerged. However, the judges' ratings of internal and external causality were highly negatively correlated for the ratings derived from description and explanation, which indicates that they successfully enforced the desired inverse relationship between internal and external attribution. A low positive correlation obtained between the subjects' ratings of internal and external causal influence.

Relationship between Results and Questions Asked

Information selection. One of the questions of interest to the present investigation was the extent to which information selection would differ as a function of the time at which the causal set instruction was introduced. The results of the analyses of causal content revealed that causally-oriented participants incuded more references to causally relevant kinds of information than those participants who were not so oriented. These results are consistent with earlier findings which suggest that individuals can comply with the immediate demands of the task-at-hand by either selectively reporting or seeking different kinds and amounts of information (Dawes, 1976; Girodo, 1973; Greene, 1976; Jones & de Charms, 1957; Zadny & Gerard, 1974).

Although information selection differences were obtained, they did not relate systematically to subsequent causal attribution. Lack of a consistent relationship between the information selected and the attributions made in this study, however, should not be interpreted to mean that causal attributions are never affected by or are never paralleled by information selection differences. It is important to emphasize that the time of exposure to the causal set instruction was the only factor included to produce differences in information selection. The results showed that similar types of causally relevant information were referred to by causally-oriented participants, but when these particular references were made depended almost entirely upon the time at which requests for causal references were made. By the time the attribution rating scales were completed, everyone but the control subjects had been exposed to the causal set instruction. Therefore, the fact that similar causal attributions were made by the majority of causally-oriented (i.e., experimental) participants is not at all surprising. The similarity between the control and the experimental participants' attributions, however, is more difficult to explain. The latter result suggests that the control and experimental subjects could have based their causal attributions on similar types of information to which the content analysis may not have been sensitive. For example, the control subjects could have considered the types of information actually reported by experimental subjects to derive their causal attributions.

Information parallelism and relevance. Kanouse (1971) suggested that the content of an individual's description and explanation should be parallel only in terms of that information which is salient to the individual. In this investigation, an attempt was made to assess the degree of overlap between the causal content included within description and within explanation, in order to examine the two questions raised in the introduction with regard to parallelism and information relevance. Unlike the suggestion made by Kanouse (1971), the present results show that there is very little parallelism between the causal content contained within an individual's description and his explanation at least on the focused causal content dimensions. The causal set results demonstrated that participants complied with the causal set instruction by including references to the focused causal content (including Kelley's consistency and consensus dimensions), but this only occurred _immediately_ _after_ the instruction had been delivered. Once the immediacy of the instructional demand was lessened participants rarely included references to focused causal content. That is, pre-observation and pre-description subjects made many more references to causally relevant information within their descriptions than within their explanations; similarly, pre-explanation subjects included more causally relevant references within their explanations than within their descriptions. The failure to find parallelism on the dimensions of focused causal content suggests that these dimensions were not salient enough for participants to be included within description and/or explanation.

There was some degree of parallelism between description and explanation with respect to the kinds of causally relevant information which participants derived from their observations (i.e., _unfocused_ causal content) as well as with respect to the causal attributions derived from written description and explanation. For example, a large number of references were made to the target actress' mood state as well as personality characteristics both within description and explanation protocols. The subsequent high internal attributions made by subjects and judges most certainly parallel the kinds of extracted unfocused causal references. However, the high external attributions made by subjects do not correspond to the meager number of references made to external causes within both description and explanation.

Attribution. An attempt was also made in this investigation to assess (a) whether or not the time at which the goal of causal evaluation was introduced would affect the participants' subsequent causal attributions and (b) whether or not the attributions offered on the typically employed rating scale measures of causal attribution would correspond at all with derivations of more naturalistically produced attributions. The locus of causality attribution dimension was the sole dimension used to summarize the participants' causal inferences. The attribution ratings made by the participants did not differ as a function of either the time of causal set instruction or distraction. Similar, but not identical, results were obtained from the content analytically derived ratings of internal and external attribution.

The failure to obtain treatment differences on the rating scale measures of attribution could be due to a variety of factors. Recall that on the rating scale items both high internal and high external attributions were made. The scenario observed in this study quite obviously demanded heavy emphasis on internal (e.g., the target actress' rude and feisty attitude) and external (e.g., the two target actors' refusal to speak with the target actress) causal influences. This factor alone could account for the high internal and external attributions made within any one of the experimental conditions. That is, the salience of internal and external factors at the time of observation could have overridden the later effects of the time of causal set and distraction manipulations on causal attribution.

For the description protocols, only the causal set manipulation had a significant effect on the extremity of the judge-derived internal and external attribution ratings -- the pre-description and control subjects received higher internal and lower external attribution ratings than subjects in the remaining conditions. The causal set manipulation also affected the ease with which the protocols could be scored in terms of internal and external attribution. Although the ratings actually derived from the control subjects' protocols were more variable than the ratings derived from the remaining three causal set conditions, significantly more of the pre-description (100%) and the control (50%) protocols could be scored in terms of internal-external attribution (only 25% of the pre-observation and pre-explanation protocols were rated along the locus of causality dimension). This result nicely corresponds with the results showing that the pre-description and control subjects' protocols could be differentiated in terms of internal and external causal influences.[8]

It is important to note that the ease with which a given protocol could be scored for internal-external attribution depended almost entirely upon the extent to which the protocol included references to focused categories of causally relevant information. These categories were rarely mentioned by subjects who had not been exposed to the causal set instruction immediately prior to the generation of a given protocol (i.e., description or explanation). Thus, the descriptions of pre-observation and pre-description subjects were relatively easier to score for internal-external attribution than were the description protocols generated by the pre-explanation and control subjects. Similarly, the explanations written by the pre-explanation subjects were easier to score than the explanation protocols generated by the remaining subjects, despite the fact that the pre-observation and pre-description subjects had earlier been exposed to the causal set instruction. Variations of the time of onset of the orienting task apparently affect information selection which, in turn, affects the extent to which internal-external attributions can be derived from a text.

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[8] The causal set, distraction, and sex factors interacted significantly for the internal attributions derived from explanation. However, there was no discernable response pattern to these data, excluding the observation that the pre-explanation subjects made lower internal attributions relative to the pre-observation, pre-description, and control subjects.

There are two important observations to be made with respect to this set of results. First of all, these results suggest that the causal categories included within the causal set instruction may have been overemphasized for the purpose of deriving subsequent attributions. If less emphasis had been placed on these categories, it is possible that other kinds of attributional information could have been derived from the protocols. Secondly, these results are yet another confirmation of the possibility that the focused causal content categories were not salient enough to subjects to warrant reference to them when no instructional demand was present.

A slight discrepancy between the content analytically derived measures of attribution and the attributions made by participants on the rating scales was also found in this study. The participants made high internal _and_ external attributions, whereas the judges derived high internal but _low_ external attributions. An examination of the kind of content included within the description and explanation protocols indicated that many more references were made to internally relevant than were made to externally relevant causal influences. The discrepancy between the magnitude of the judges' and subjects' external attribution ratings is quite understandable given the paucity of external cause references. There were simply not enough of these references within the protocols to warrant deriving high external attributions. External causal information could have been salient to subjects even though they rarely referred to it within their protocols. However, it is still not clear why subjects would have differentially referred to internally and externally relevant causal information within their descriptions and explanations, while at the same time emphasizing both types of causality to the same degree on rating scale measures of attribution. This discrepancy cannot be evaluated given the recall data collected in this study; it is an empirical question which will have to be resolved elsewhere.

The way in which judges and subjects conceptualized the relationship between internal and external attribution also yielded some highly discrepant, yet interesting, results. Equally valid arguments can be made in favor of viewing internal and external causes either as independent or as inversely related (Elig & Frieze, 1974). Judges were told to view internal-external causes as inversely related. If one examines the correlations obtained between the judges' derived ratings of internal and external attribution it is found that the judges, in fact, adopted this perspective. The correlations between these ratings were all quite high and negative (ranging from -.98 to -.99).

Quite a different picture emerges in the correlations between the subjects' internal and external attributions. The correlations here were low and positive (ranging from +.12 to +.52). Hence, internal-external causes were independent from the subjects' perspective. These results suggest that the inverse relationship which judges were instructed to enforce between internal and external attribution, however valid theoretically, was not phenomenally salient to subjects. Whatever rating discrepancy was manifested in these data is partially due, therefore, to a failure to orient participants in the same manner as judges, or vice versa. These results also strongly suggest that more concentrated efforts should be devoted to assessing how individuals conceptualize the relationship between internal and external causality.

Distraction. The effects of distraction on information selection and causal attribution were also examined in this investigation. Distraction had minimal effects both on causal attribution and on the content of the explanation protocols.

However, a significant simple interaction obtained between causal set and distraction on four of the causal content dimensions for the analyses of the pre-observation and pre-description subjects' description protocols. The pre-observation subjects, when distracted, included fewer references to these dimensions than did their nondistracted counterparts. This result suggests that distraction does affect the extent to which individuals include causally relevant information within description. The opposite conclusion would be made, however, upon examination of the results for the pre-description subjects. These subjects, when distracted, included more references to the four causal content dimensions than did their nondistracted counterparts.

It is extremely difficult to account for the discrepant effects of distraction on the content of the pre-description and pre-observation description protocols. An adequate explanation for these effects would most probably be based on the results and interpretations of cognitive research concerned with selection and rehearsal strategies . However, the methodology and measures used in this study were not designed to tease out subtle differences in selection and/or rehearsal as a function of distraction and orienting task constraints. Therefore, any explanation offered to account for the discrepancies observed within these data would be purely speculative and post-hoc and will not be offered here.

Content Analysis

The content analytic results of this experiment highlight the importance of making the distinction between what individuals can do given certain orienting constraints and what they will do without them. The control participants were not given orienting instructions relevant to the task of causal attribution and they gave little information presumably relevant to this task in return. Hence, judges' assessments of internal-external attribution were extremely difficult to make. When the same participants were required to complete well-confined rating scale measures of atribution, however, they produced responses similar to those made by experimental subjects, even though the content of the two group's protocols differed greatly. There are several implications of these results for the area of attribution in general as well as for the use of protocol analysis in attribution research.

Attribution. The content of the control participants' protocols differed greatly from the other participants' texts, while their rating scale attributions did not. These results are amenable to several interpretations, but none of these can be accepted or rejected on the basis of the results of this study alone. It could very well be the case that the categories in terms of which the protocols were summarized were not sensitive to the information upon which the subjects' based their causal analyses. Alternatively, the rating scale measures of internal-external attribution may not be sensitive to or may be independent of informational recall differences within the presently employed context. The data available here cannot be analyzed to determine which of these is more likely the case. However, the content of the control protocols does suggest that respondents will only give the kind of information desired if and only if it is explicitly requested.

The rating scale format is used in the attribution research primarily because it allows for comparisons among participants on the experimenter-defined scales and dimensions. The important comparisons among participants are usually made in terms of the extent to which a specified dimension is perceived to have a causal effect. The free response format cannot be used as easily for this purpose because there is no guarantee that the dimensions referred to by a set of participants will overlap. For example, if subject A referred to dimensions U, V, and W, while subject B referred to dimensions X, Y, and Z, then the only comparison that can be made between these two participants is in terms of the presence versus absence of effects U,V,W,X,Y, or Z within both of their protocols. Finer gradations in terms of the magnitude of a given effect cannot be made unless the rather crude measure of relative frequency with which a given dimension is referred to is used.

The frequency criterion was used by the judges to derive their ratings of causal attribution. Comparisons were made by them between the frequency with which internal causal references were made and the frequency with which external causal references were made. If both causal categories were mentioned equally often, then similar internal and external attribution ratings were made. The magnitude of the attribution was assessed by the absolute frequency of internal or external causal references.

It is not clear how well the frequency criterion matches the criterion used by individuals to derive their causal inferences. It is also not clear how much potentially useful information was not derived from the protocols because of the use of this criterion. These two ambiguities are in need of clarification before the method of protocol analysis used in this study is employed in future research to assess correspondences between rating scale and free response attributions.

Information selection, relevance, and parallelism. The causal set questions were designed to focus participants on what were believed to be categories of causally relevant information. The questions asked were derived mainly from Jones & Nisbett's classification of causally relevant information into historical, cause, and effect data. The development of the content analytic procedure involved listing the dimensions which would, at the same time, (a) best represent historical, cause, and effect categories as well as (b) best represent other kinds of information which did not fit well within these three categories. The final set of dimensions employed appeared to fulfill these requirements. Yet, in the actual process of applying the scoring procedure to the protocols, it seemed as if a good deal of "causally relevant information" contained within them could not be described by existing dimensions. Furthermore, these apparent causal references were almost impossible to categorize. Rather than developing a miscellaneous category, the judges were instructed to note that concepts like these existed. In later analyses, these concepts contributed to the overall measure of causal relevance, but did not contribute to any of the dimension-by-dimension comparisons. Therefore, it is not clear how well the content analytic technique employed captured the full spectrum of causally relevant information. Because of this ambiguity, this particular technique would best be viewed as a first approximation to the kinds of protocol analyses which might be used in future attribution research.

However, the fact that there are certain ambiguities in the use of a free-response format to assess causal attribution should not be interpreted to mean that some of the anomalous results of this study are not due to problems with subjects' use of traditional rating scale measures of attribution. It is clear from these results that concentrated research effort should be devoted to assessing how currently employed dimensions of attribution are interpreted by respondents. The internal and external anchors of the locus of causality dimension are very global labels. Two individuals could offer internal or external attributions of the same magnitude, but they could be referring to two entirely different aspects of internal causality, e.g., ability or effort, and external causality, e.g., luck or task difficulty (cf. Weiner, et al. 1971). The ambiguous meaning of internal and external causality alone might account for many of the inconsistent results obtained in research on actor-observer differences in causal attribution, achievement motivation, etc.

Protocol analysis might serve to clarify this ambiguity. This kind of analysis would best serve initially to identify and classify subject-defined categories of causally relevant information. Free response attributions could be solicited for a specified behavior or class of behaviors (e.g., McArthur's, 1971, accomplishments, actions, emotions, and opinions). These responses could be coded into a set of causal dimensions which the investigator believes best captures the causal meaning underlying them. More controlled methods (e.g., the information selection method employed by Jones & Thibaut, 1958) and less controlled methods (e.g., extant question-asking methods, cf. Abelson, 1967) for analyzing information relevance could be used to ascertain whether or not the free response attributions discriminate among conceptually different stimulus conditions. Cue-utilization paradigms (cf. Slovic & Lichtenstein, 1971) could then be used to ascertain the relative salience of these kinds of information to individuals as a function of variations in the evaluative context or task demands. Repeated applications of these techniques across a wide variety of situations using a large sample of respondents would more than likely provide the area of attribution with a more representative taxonomy of attribution than is currently available in the literature.

Because there is bound to be ambiguity in the preliminary stages of developing a viable content analytic technique, future research concerned with the parallelism between information selection and causal attribution might adopt a more simple strategy than the one employed in this investigation. Participants might simply be given the information that a certain type of attribution was made for a specified target behavior. On the basis of this information participants might then be required to deduce the kinds of information which would be necessary to be confident in the earlier specified attribution.

The method of analysis employed in this investigation consistently reinforced the previously expressed view that there is still much to be learned about the nature of the relationship between causal attribution and the information upon which these kinds of causal inferences are based. Protocol analysis, at least as it was used in this study, can only serve as a first approximation to the kind of knowledge needed regarding the relationship between information selection, information relevance, and causal attribution. In addition to employing protocol analysis for this purpose, attempts to determine what kinds of information individuals believe are relevant to the task of causal attribution would best proceed by: (1) simply asking participants to indicate what kind(s) of information they would like to have in order to be confident (perhaps to varying degrees) in a specified type of causal attribution (e.g., internal or external), (2) determining whether the types of information requested cluster into any of the available categories of causally relevant content (e.g., Kelley's) or whether they define new categories, and (3) assessing the contextual specificity or generality of the dimensions identified from steps 1 and 2. These three steps could be undertaken with respect to any and all of the classes of behaviors within which the construct of attribution has engaged so much conceptual and empirical attention (e.g., altruism, Greenberg, 1975; achievement motivation, Weiner, et al., 1971).

TABLE 1

Summary Table for the Analysis of Variance Conducted on the Average Number of Actions Mentioned

Source	*SS*	*df*	*MS*	*F*	*p*
Causal set: CS	1035.15	3	345.05	4.25	.008
Distraction: D	318.81	1	318.81	3.93	.05
CS X D	304.48	3	101.49	1.25	
Error	6246.30	77	81.12		

TABLE 2

Mean Number of Actions Mentioned: Descriptions

	Causal Set Instruction Condition			
	PO	PD	PE	C
Distraction	35.50	28.96	33.20	34.74
No distraction	32.25	23.23	28.54	34.94

Table 3

Mean Accuracy Ratings: Descriptions

	Causal set instruction condition			
	PO	PD	PE	C
Distraction	4.29	3.50	5.07	5.31
No distraction	3.02	3.08	2.83	3.67

Note. higher scores indicate greater accuracy.

Table 4

Mean Number of Behavioral Intention References: Descriptions

	Causal set instruction condition PO	PD	PE	C
Distraction	.137	.891	.029	.055
No distraction	.715	.017	.036	.044

Table 5

Mean Number of External Causality References: Descriptions

5a: Sex X Distraction

	Male	Female
Distraction	.313	2.572
No distraction	1.242	2.313

5b: Causal Set X Distraction

	Causal Set Instruction Condition PO	PD	PE	C
Distraction	.393	4.725	.481	.223
No distraction	5.889	.409	.366	.451

Table 6

Mean Number of References to Consistency Information: Descriptions

Causal set instruction condition PO	PD	PE	C
.378	.439	.025	.002

Table 7

Mean Number of References to Consensus Information: Descriptions

	Causal set instruction condition PO	PD	PE	C
Distraction	.04	.409	.014	.000
No distraction	1.44	.075	.022	.004

Table 8

Mean Number of Causally Relevant Concepts Relative to the Total Number of Concepts: Descriptions

Causal set instruction condition			
PO	PD	PE	C
.178	.195	.121	.032

Table 9

Mean Ratings of Internal Causal Emphasis within each Concept: Descriptions

Causal set instruction condition			
PO	PD	PE	C
2.33	1.30	.620	.585

Note. higher scores indicate greater emphasis on internal causality.

Table 10

Mean Number of References to the Actress' Mood States: Descriptions

	Causal set instruction condition			
	PO	PD	PE	C
Distraction	.666	5.626	.834	.908
No distraction	11.140	.671	.820	.872

Table 11

Mean Number of References to Behavioral Intentions: Explanations

Causal set instruction condition			
PO	PD	PE	C
.190	.163	1.85	.123

Table 12

Mean Number of References to Consistency Information: Explanations

Causal set instruction condition			
PO	PD	PE	C
.082	.063	1.81	.024

Table 13

Total Number of Causally Relevant Concepts and the Total Number of Concepts included within Description and Explanation

	Causal Set	Instruction	Condition	
	PO	PD	PE	C
Description				
Distraction				
CRC[1]	6.80	8.41	4.80	3.60
TOTCON[2]	54.70	49.64	56.40	50.10
No distraction				
CRC	4.50	9.09	7.10	4.70
TOTCON	49.44	49.36	55.50	56.50
Explanation				
Distraction				
CRC	11.50	13.80	14.21	9.30
TOTCON	26.60	29.70	35.70	22.00
No distraction				
CRC	1[illegible].22	10.64	8.79	10.95
TOTCON	2[illegible].22	26.82	35.50	29.00

[1] abbreviation for "causally relevant concepts"
[2] abbreviation for "total number of concepts"

Table 14

Mean Number of References to the Actress' Mood States: Explanations

Causal set instruction condition			
PO	PD	PE	C
.700	.035	7.64	.403

Table 15

Mean Number of References to the Dispositional Characteristics of the Actress: Explanations

Causal set instruction condition			
PO	PD	PE	C
.510	.330	3.43	.105

Table 16

Mean Rating of Internal Causal Emphasis within each Concept; Descriptions

	Causal Set Instruction Condition PO	PD	PE	C
Male	1.98	1.56	2.05	1.50
Female	1.83	2.05	1.82	1.31

Table 17

Repeated Measures Analysis of Variance Results for Description and Explanation on Measures of Causal Content and Total Content

Measure	Protocol Type Descrip.	Explan.	ANOVA Summary Protocol Type Main Effect F(1,56)	p
Intentions	.61	1.61	22.54	.001
External causes	2.41	5.09	27.85	.001
Dispositions	.82	2.90	30.39	.001
Mood	4.62	5.78	5.53	.001
Internal causes of mood	.49	.89	8.66	.004
External causes of mood	.94	1.31	8.04	.006
Consistency	.19	.82	22.66	.001
Consensus	.37	.34	.07	.790
Internal causal emphasis/concept	1.03	1.87	40.31	.001
External causal emphasis/concept	.90	1.07	2.26	.140
Internal attrib.	4.15	5.60	11.57	.001
External attrib.	2.75	3.53	4.49	.040
Causally relevant concepts	6.16	11.54	42.77	.001
Total number of concepts	52.02	28.49	129.60	.001

Table 18

Mean Number of References to Dispositions:
Description and Explanation

	Causal set instruction condition			
	PO	PD	PE	C
Description	1.27^{1}	1.52^{3}	$.23^{2}$	$.27^{1}$
Explanation	3.17^{1}	2.00^{4}	4.75^{2}	1.69^{1}

Table 19

Mean Internal Attribution Scores:
Description and Explanation

	Causal set instruction condition			
	PO	PD	PE	C
Description	3.96^{1}	6.85^{3}	3.23^{1}	2.55^{2}
Explanation	5.81^{1}	6.14^{4}	5.07^{1}	5.38^{2}

Note. higher scores indicate greater internal attributions.

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[1] means showing common superscripts within a column are significantly different at the .05 level using a two-tailed *t* test

[2] means showing common superscripts within a column are significantly different at the .001 level using a two-tailed *t* test

Table 20

Intradimensional Correlations for Causal Content and Total Content Collapsed Across Conditions: Description-Explanation[1]

Measure	r	p
Intent	.26	.020
External causes	.49	.001
Disposition	.12	.276
Mood	.76	.001
Consistency	-.10	.385
Consensus	-.09	.429
Internal causal emphasis/concept	.23	.023
External causal emphasis/concept	.15	.201
Internal attrib.	.07	.273
External attrib.	.05	.328
Causally relevant concepts	.04	.368
Total number of concepts	.09	.215

[1] These correlations are based on the scores assigned to each dimension collapsed across the causal set and distraction condition assignments for the description and explanation data (n=74).

Table 21

Correlations for Causal Content and Total Content within each Condition: Description-Explanation[1]

Measure	PO/D (n=10)	PO/ND (n=8)	PD/D (n=9)	PD/ND (n=9)
Intention	-.20 (.58)[2]	-.05 (.91)	.92 (.001)	.17 (.67)
External causes	.14 (.70)	.20 (.64)	.59 (.09)	-.55 (.13)
Disposition	-.19 (.60)	-.07 (.88)	.67 (.03)	.11 (.76)
Mood	.57 (.08)	.76 (.03)	.99 (.001)	-.18 (.65)
Consistency	99.[3]	-.21 (.62)	-.31 (.42)	-.17 (.66)
Consensus	.21 (.56)	-.21 (.62)	-.34 (.38)	.03 (.93)
Internal causal emphasis/concept	.48 (.08)	.05 (.45)	.60 (.05)	.15 (.35)
External causal emphasis/concept	.27 (.44)	-.31 (.38)	.24 (.50)	.66 (.04)
Internal attrib.	.63 (.03)	-.26 (.27)	.46 (.11)	-.28 (.23)
External attrib.	.26 (.24)	-.23 (.29)	.35 (.18)	-.12 (.38)
Causally relevant concepts	.09 (.40)	-.15 (.37)	.02 (.48)	-.20 (.31)
Total number of concepts	.45 (.09)	-.19 (.33)	.03 (.46)	-.16 (.34)

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[1] These correlations are based on the scores assigned to each dimension within each of the eight major conditions of the experiment for description and explanation.

[2] Parenthesized numbers are the probability values for correlation.

Table 21 continued

Measure	PE/D (n=9)	PE/ND (n=9)	C/D (n=10)	C/ND (n=10)
Intention	-.21 (.60)	-.19 (.62)	-.17 (.64)	.002 (.99)
External causes	-.26 (.49)	-.21 (.59)	-.42 (.23)	.017 (.96)
Disposition	-.24 (.50)	-.17 (.65)	.22 (.54)	.73 (.02)
Mood	.61 (.08)	.32 (.40)	-.04 (.91)	.71 (.02)
Consistency	99.[3]	-.21 (.59)	99.[3]	.06 (.88)
Consensus	-.18 (.64)	-.16 (.68)	99.[3]	-.17 (.65)
Internal causal emphasis/concept	.27 (.25)	-.57 (.06)	.26 (.23)	-.63 (.03)
External causal emphasis/concept	.14 (.69)	.18 (.65)	-.11 (.76)	-.10 (.78)
Internal attrib.	-.74 (.011)	.04 (.46)	.56 (.05)	-.49 (.08)
External attrib.	.15 (.36)	-.43 (.13)	.02 (.44)	.53 (.06)
Causally relevant concepts	-.76 (.009)	.30 (.22)	.05 (.44)	.35 (.16)
Total number of concepts	.10 (.40)	.07 (.43)	.48 (.08)	-.06 (.43)

[3] Correlations could not be computed because there were no variance differences.

Table 22

Mean Overall Rating of Internal and External Causal Influence: Descriptions

22a: Causal Set Main Effect

	Causal set instruction condition			
	PO	PD	PE	C
Internal	5.71	6.74	4.68	6.22
External	4.32	3.22	5.34	3.77

22b: Sex Main Effect

	Male	Female
Internal	5.81	5.87
External	4.02	4.29

Note. higher scores indicate greater emphasis on internal or external causal infuences

Table 23

Mean Rating of Internal Attribution: Explanations

	Causal set instruction condition			
	PO	PD	PE	C
Distraction				
Male	7.17	6.72	5.67	7.00
Female	5.00	5.67	4.66	5.78
No distraction				
Male	5.40	5.81	5.17	5.02
Female	6.75	6.25	4.69	6.75

Note. higher scores indicate greater internal attributions.

Table 24

Intercorrelations between and within the Judge- and Subject-Generated Ratings of Internal and External Causality: Descriptions

	Causal set instruction condition			
	PO	PD	PE	C
Distraction				
SIR:JIR [1]	.46	.65	-.46	-.69
SER:JER	-.16	-.31	.08	.25
JIR:JER	-.99[2]	-.99[2]	-1.00[2]	-.99[2]
SIR:SER	.33	.36	.12	.35
No distraction				
SIR:JIR	.13	.16	.18	.37
SER:JER	.28	.08	.24	.02
JIR:JER	-.98[2]	-1.00[2]	-1.00[2]	-1.00[2]
SIR:SER	.52	.50	.26	.30

[1] "S" represents "subject's", "J" represents "judges'", "I" represents "internal attribution", "E" represents "external attribution", "R" represents "ratings"

[2] $p < .001$

Table 25

Intercorrelations between and within the Judge- and Subject-generated Ratings of Internal and External Causality: Explanations

	Causal set instruction condition			
	PO	PD	PE	C
Distraction				
SIR:JIR	.66	-.78	.35	-.02
SER:JER	-.43	.12	.44	.70
JIR:JER	-1.00^{3}	$-.98^{3}$	-.61	-1.00^{3}
No distraction				
SIR:JIR	.44	.28	$.77^{2}$	.33
SER:JER	.25	-.23	.56	-.11
JIR:JER	$-.98^{3}$	$-.96^{3}$	$-.90^{3}$	$-.63^{1}$

^{1} $p < .05$, ^{2} $p < .01$, ^{3} $p < .001$

References

Abelson, R.P. Psychological implication. In R.P. Abelson, E. Aronson, W.J. McGuire, T.M. Newcomb, M.J. Rosenberg, & P.H. Tannenbaum (Eds.), Theories of cognitive consistency: a sourcebook. Chicago: Rand McNally & Co., 1968.

Abelson, R.P. & Kanouse, D.E. The acceptance of generic assertions. In S. Feldman (Ed.), The Consistency Postulate in Attitude Theory and Research. New York: Academic Press, 1966.

Arkin, R., & Duval, S. Focus of attention and causal attribution of actors and observers. Journal of Experimental Social Psychology, 1975, 11, 427-438.

Bem, D.J. Self perception theory. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 6). New York: Academic Press, 1972.

Bransford, J.D. & Franks, J.J. The abstraction of linguistic ideas. Cognitive Psychology, 1971, 2, 331-350.

Brunswik, e. Representative design and probabilistic theory in a functional psychology. Psychological Review, 1955, 62, 193-217.

Crothers, E.J. Memory structure and the recall of discourse. In R. Freedle & J.B. Carroll (Eds.), Language comprehension and the acquisition of knowledge. Washington, D.C.: V.H. Winston, 1972.

Cunningham, J.D., & Kelley, H.H. Causal attributions for personal events of varying magnitude. Journal of Personality, 1975, 43, 74-93.

Dawes, R.M. Shallow psychology. In J.S. Carroll & J.W. Payne (Eds.), Cognition and Social Behavior. New Jersey: Lawrence Erlbaum Associates, 1976.

Fishbein, M., & Ajzen, I. Attribution of responsibility: a theoretical note. Journal of Experimental Social Psychology, 1973, 9, 148-153.

Frederikson, C.H. Semantic information processing in the acquisition of knowledge from written text. Paper presented at symposium on "Methodologies for research on written materials," American Psychological Association, Montreal, Canada, August 29, 1973.

Frederikson, C.H. Effects of context-induced processing operations on semantic information acquired from discourse. Cognitive Psychology, 1975, 7, 139-166.

Frederikson, C.H. Acquisition of semantic information from discourse: effects of repeated exposures. Journal of Verbal Learning and Verbal Behavior, 1975, 14, 158-169.

Garland, H., Hardy, A., & Stephenson, L. Information search as affected by attribution type and response category. Personality and Social Psychological Bulletin, 1975, 1, 612-615.

Girodo, M. Film-induced arousal, information search, and the attribution process. Journal of Personality and Social Psycology, 1973, 25, 357-360.

Greene, D. Social perception as problem solving. In J.S. Carroll & J.W. Payne (Eds.), Cognition and Social Behavior. New Jersey: Lawrence Erlbaum Associates, 1976.

Hansen, R.D. & Lowe, C.A. Distinctiveness and Consistency: The influence of behavioral information on actors' and observers' attributions. Journal of Personality and Social Psychology, 1976, 34, 425-433.

Heider, F. Social perception and phenomenal causality. Psychological Review, 1944, 51, 358-374.

Heider, F. The psychology of interpersonal relations. New York: John Wiley & Sons, 1958.

Ickes, W.J., & Kidd, R.F. An attributional analysis of helping behavior. In J.H. Harvey, W.J. Ickes, & R.F. Kidd (Eds.), New Directions in Attribution Research. New Jersey: Lawrence Erlbaum Associates, 1976.

Jones, E.E., & Davis, K.E. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 2). New York: Academic Press, 1965.

Jones, E.E., & de Charms, R. Changes in social perception as a function of the personal relevance of behavior. Sociometry, 1957, 20, 75-85.

Jones, E.E., & Nisbett, R.E. The actor and observer: Divergent perceptions of the causes of behavior. Morristown, New Jersey: General Learning, 1971.

Jones, E.E., & Thibaut, J.W. Inteaction goals as bases of inference in interpersonal perception. In R. Tagiuri & L. Petrullo (Eds.), Person perception and interpersonal behavior. Stanford, California: Stanford University Press, 1958.

Kanouse, D.E. & Gross, D. From specific acts to general dispositions. Unpublished manuscript, U.C.L.A., 1970.

Kelley, H.H. Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska Symposium on Motivation*. Lincoln: University of Nebraska Press, 1967.

Kelley, H.H. *Attribution in social interaction*. Morristown, New Jersey: General Learning Press, 1971(a).

Kelley, H.H. *Causal schemata and the attribution process*. Morristown, New Jersey: General Learning Press, 1971(b).

Kelley, H.H. The process of causal attribution. *American Psychologist*, 1973, *28*, 107-128.

Kelley, H.H. *Recent research in causal attribution*. Invited address, Western Psychological Association, Los Angeles, 1976.

Kruglanski, A.W. The endogeneous-exogeneous partition in attribution theory. *Psychological Review*, 1975, *82*, 387-406.

McArthur, L. The how and what of why: Some determinants and consequences of causal attribution. *Journal of Personality and Social Psychology*, 1972, *22*, 171-193.

Newtson, D. Attribution and the unit of perception of ongoing behavior. *Journal of Personality and Social Psychology*, 1973, *28*, 28-38.

Newtson, D. Foundations of attribution: the perception of ongoing behavior. In J.H. Harvey, W.J. Ickes, & R.F. Kidd (Eds.), *New Directions in Attribution Research*. New Jersey: Lawrence Erlbaum Associates, 1976.

Nisbett, R.E., & Borgida, E. Attribution and the psychology of prediction. *Journal of Personality and Social Psychology*, 1975, *32*, 932-945.

Nisbett, R.E., Caputo, C., Legant, P., & Marecek, J. Behavior as seen by the actor and as seen by the observer. *Journal of Personality and Social Psychology*, 1973, *27*, 154-165.

Orvis, B.R., Cunningham, J.D., & Kelley, H.H. A closer examination of causal inference: the roles of consensus, distinctiveness, and consistency information. *Journal of Personality and Social Psychology*, 1975, *32*, 605-616.

Rule, B.G., Nesdale, A.R., & McAra, M.J. Children's reactions to information about the intentions underlying an aggressive act. *Child Development*, 1974, *45*, 794-798.

Schioldberg, P. Selective attention and relevance--

irrelevance in recall. Scandanavian Journal of Psychology, 1975, 16, 11-14.

Slovic, P., & Lichtenstein, S. Comparison of Bayesian and regression approaches to the study of human information processing in judgement. Organizational Behavior and Human Performance, 1971, 6, 649-744.

Storms, M.D. Videotape and the attribution process: Reversing actors' and observers' points of view. Journal of Personality and Social Psychology, 1973, 27, 165-175.

Taylor, S.E. The development of cognitive social psychology. In J. Carroll & J. Payne (Eds.), Cognition and Social Behavior. New Jersey: Lawrence Erlbaum Associates, 1976.

Taylor, S.E. & Fiske, S.T. Point of view and perception of causality. Journal of Personality and Social Psychology, 1975, 32, 439-445.

Weiner,B., Freize, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R.M. Perceiving the causes of success and failure. In E.E. Jones, D.E. Kanouse, H.H. Kelley, R.E. Nisbett, S. Valins, & B. Weiner (Eds.), Attribution: Perceiving the causes of behavior. Morristown, New Jersey: General Learning Press, 1972.

Zadny, J., & Gerard, H.B. Attribution intentions and informational selectivity. Journal of Experimental Social Psychology, 1974, 10, 34-52.

APPENDIX A

DESCRIPTION OF SCENARIO

SCENE	ACT	
1	1	Surrounding shot of a lounge. All of the customers are drinking, laughing, talking, and having a generally good time.
	2	A couple in their mid-twenties enter the lounge.
	3	The man (John) points to a table in the corner of the lounge.
	4	John and his date (Heather) stop at another couple's table (Lois and Don's).
	5	Heather looks at Lois conveying an attitude of "Oh, it's you.".
	6	Heather walks away to a corner table and sits down, obviously disgusted with the situation.
	7	She leaves John to continue his conversation with Lois and Don.
	8	John, Lois, and Don give Heather a quizzical look.
	9	They then resume their conversation.
	10	John motions to Lois and Don that he should join Heather.
	1	John joins Heather at her table.
	2	John touches her hand and inquires as to what's bothering her.
	3	Heather shrugs her shoulders (as if to convey an apathetic reaction).
	4	John looks at her in disgust (as if to convey the attitude "Alright, be that way.").
	5	John asks Heather if she would like a drink.
	6	Heather shrugs: "Yes, I guess so."
	7	John motions the waitress for a cocktail

menu.

1 Shot of another couple, Mike and Cathy, holding hands at their table.

2 The waitress walks in with a tray and proceeds to John and Heather's table.

3 Waitress re-enters and puts the cocktail menu down on John and Heather's table.

4 Waitress exits via Mike and Cathy's table. She stops at their table to collect some empty beer bottles and to take their next order.

1 Camera on Heather and John perusing the cocktail menu.

2 John looks interested in the list and tries to catch Heather's interest by pointing selections on the menu out to her.

3 Heather acts despondent.

4 She puts the cocktail menu down.

5 She mouths: "I don't care what I drink--you order for me."

1 Camera catches the waitress entering and walking over to the corner table where John and Heather are sitting.

2 The waitress takes their order.

3 John and Heather converse.

4 John inquires as to why Heather is so despondent.

5 Heather responds that she is tired and that it's been a long and bad day, but that she'll try to cheer up.

6 Their conversation assumes a lighter character.

1 The camera catches the waitress entering with the first set of drinks for John and Heather.

1 The waitress puts down the drinks and the tab.

1 John and Heather toast and drink.

2 Heather chokes on her drink and says: "God, that's awful. Who made this?"

3 John says: "Let me try it."

4 John tastes the drink.

5 He shrugs his shoulders indicating that the drink tastes fine to him.

6 He then responds: "But if you want, I'll get you another."

7 John motions for the waitress.

1 The waitress enters and inquires as to what the problem is.

2 John responds with the statement that there seems to be something wrong with the drink.

3 Heather says: "You're damn right there's something wrong with the drink. What are you trying to do?--Poison me?"

4 The waitress states: "I don't understand. Is this the kind of drink you ordered- a rye and ginger?"

5 Heather replies: "I can't tell. Someone's put an inordinate amount of something in there which certainly doesn't taste like RYE AND GINGER!"

6 Heather proceeds to shove the drink into the waitress' hand.

7 The waitress exits mouthing, "What a bitch."

1 Diane and Angeline enter and sit down at a table between Lois and Don and Michael K. and Kenneth M.

2 Michael K. gets up (staggering movements--he's obviously quite drunk).

3 Michael K. walks over to the table where Lois and Don are sitting.

4 He tries to "pick-up" Lois.

5 Lois protests, requesting that Mike return to his own table and leave her alone.

6 Mike turns to Don and asks: "What's wrong with her?"

7 Don responds: "Hey fella, why don't you go and sit down?"

8 Michael K. starts to dance, pulling Lois' arm, trying to get her up and dancing with him.

9 Don states, "Didn't you hear me? I said leave her alone."

10 Michael K. replies, "O.K., O.K., I've got your point."

11 The drunk's friend, Kenneth M., comes over to the table where Michael K. is causing a scene.

12 Kenneth M. tries to coax Michael K. back to their table.

13 Michael K. complies and staggers back to his seat.

1 There is a brief surrounding shot of the lounge; the camera catches the waitress bringing in Heather's new drink.

2 She arrives at John and Heather's table.

3 As the waitress is putting down the drink, Heather states, "It's about time."

4 John leans over and touches Heather on the arm, trying to calm her down.

5 Heather immediately calms down and tries the

new drink.

6 She states that the drink is much better than the first one and the waitress proceeds to exit via Michael K.'s and Kenneth M.'s table.

1 The waitress is passing the drunk's table.

2 On the way by, Michael K. grabs the waitress and attempts to sit her down on his lap.

3 The waitress protests, pulls away from him, and exits.

1 Kenneth M. and Michael K. get up to leave.

2 Michael K., of course, is having a difficult time preparing to exit. He fumbles putting his coat on and drops a pocket full of change all over the floor of the lounge.

3 Michael K. and Kenneth M. begin making their way out of the lounge.

4 Michael K., rather than leaving, sits down at Lois and Don's table.

5 Kenneth M. first apologizes to Lois and Don for Michael's earlier rude behavior, he shrugs his shoulders in exasperation, and joins Michael at Lois and Don's table.

1 Camera focuses on Mike and Cathy's table. Mike motions for the waitress.

2 The waitress enters, stops at their table, asking them if they would like anything else to drink.

3 They respond positively.

4 The three of them start talking about John and Heather.

5 Mike points to their table (looking annoyed) stating that he wishes they would shut up.

6 The waitress agrees, turning toward John and Heather's table as John as motioned her for

another drink.

1 Kenneth M. and Michael K. haven't gotten around to leaving (the camera is focused on the table where they're sitting.

2 Michael K. has calmed down a bit.

3 He has his head in his hands as if to portray a headache.

4 The waitress goes to Mike and Cathy's table and sets their drinks down.

5 Mike and Cathy smile and say, "Thank you."

6 The waitress proceeds to John and Heather's table.

1 The waitress sets Heather's drink down.

2 As the waitress leans over to set John's drink down Heather touches the waitress' arm as if to apologize for being such a grouch earlier.

3 The waitress spills the drink both on Heather and all over the table.

4 Heather withdraws and sulks.

5 John tells the waitress it's o.k. and that it wasn't her fault.

6 The waitress gushes apologetically and goes to get something to clean up the mess.

Camara fades out, then fades in again.

1 A newcomer, Keith, has entered the lounge during the time lapse ; he is sitting at John and Heather's table with a beer in front of him.

2 John, Heather, and Keith are conversing.

3 After a few seconds, Heather pulls an envelope out of her handbag.

4 Keith opens the envelope and removes its contents.

5 As Keith reads through it (with apparent thoughtful deliberation), he begins to look pleased.

6 Heather looks puzzled by his reaction (Her facial and bodily expressions convey the possibility that she didn't expect that kind of reaction from Keith.)

7 Keith shows the document to John.

8 John, too, looks interested and pleased: he congratulates Keith H.

9 As the two men are congratulating one another, Heather is becoming visibly upset by their actions.

10 Heather takes the document from Keith, turns to the second page, and begins to point out things to him which she thinks should bother him.

11 Keith tries to explain his reaction by turning to various pages and pointing out "passages" to Heather.

12 John consistently agrees with Keith throughout the interchange between Heather and Keith.

13 John also looks puzzled throughout the conversation by Heather's strange reaction to the situation.

14 Heather is becoming more and more noticeably upset to the point of becoming physical.

15 She shakes the document and screams at Keith.

16 Keith and John try to calm her down.

17 They try to explain some more of the document to her.

18 Heather calms down a bit, responding: "O.K., I see what you mean."

19 Keith folds up the document and pockets it.

20 The three of them continue their earlier discussion.

Camara fades out, then fades in again.

1 A heated argument is taking place at John and Heather's table.

2 Heather is yelling at John and Keith regarding the contents of the document.

3 Keith withdraws, by slouching back in his chair, in disgust.

4 Heather turns to Keith and screams at him, shaking the document.

5 Now, both John and Keith don't know how to deal with Heather; they attempt to placate her.

6 Heather pulls her handbag onto her lap and sits their sulking.

7 Keith and John ignore Heather by turning away from her and starting their own conversation.

8 Heather sits there looking really dejected.

9 Heather says something to John and Keith.

10 She then starts yelling at them about the document again.

11 They brush her off.

12 Keith tells her she's being silly; Heather tells him to shutup.

13 With a wave of his hands, Keith dismisses her.

14 Heather becomes really offended at this and says: "Alright, I will !"

15 She gets up to storm out of the lounge.

16 Heather shoves Keith out of the way and stomps out of the lounge.

17 John and Keith both have surprised expressions on their faces.

18 John stands up as if he is going to go after her.

19 He then shrugs his shoulders and sits back down.

20 The final shot of the lounge shows the entire group of customers looking at the corner table with surprise.

APPENDIX B

CAUSAL SET INSTRUCTION

"While you are watching the film [(writing your description),(writing your explanation)], please consider the following questions and how you would answer them:

(1) What happened in the film?

Please consider the following:

(a) What actions took place?

(b) Where was the action located?

(c) What was the end results of the actions?"

(2) "Why did the girl at the corner table behave the way she did throughout the film?

Please consider the following:

(a) What did the girl do to the guy who was later sitting at her and her date's table?

(b) How did the girl feel toward her date and the other guy?

(c) What triggered the girl's reaction at the end of the film?

(d) What were the girl's intentions for behaving as she did?

(e) Could you learn anything about the girl from her bodily gestures?

(f) What do you think of the girl's personality?"

(3) "Would other people (i.e., people in general) have responded to the situation as the girl did?"

(4) "Would the girl behave similarly in other situations?""

APPENDIX C

DESCRIPTION OF INTERPOLATED TASK

The interpolated task in the present study was designed to assess the degree to which common, high frequency four letter nouns are associated with each other. Martin (1971) has suggested that the only way preexperimentally unrelated components of a stimulus complex can come to elicit each other is by mediation through a common response. In support of this notion, he presented his subjects with three, four letter word stimuli paired with a four letter word response in a paired associate task. After subjects reached criterion learning, they were presented with each stimulus word by itself and were asked for recall of the response and the other remaining words. Whenever the response was recalled to a presented component, the probability of recalling at least one other component was relatively high; if the response was not recalled this probability was low, but not zero. Because Martin used words that were 'intuitively' unrelated, he speculated that this low probability reflected a small degree of preexperimental association on the part of the subjects, rather than the formation of associative bonds between stimulus components during the experiment.

The nouns collected were used to control for this source of error on a subsequent partial replication of Martin's experiment. These norms were collected by presenting a four letter word aurally to subjects by means of a tape recorder. As each word was presented, subjects were to first write the word on the top blank of a 6"x4" page in their booklet and then write down any other words that the presented word made them think of. After they wrote down as many words as they could, or upon the presentation of a new word, subjects were required to turn the page and repeat the task. Each subject was given thirty-five words with a 10 second interval between each word. There were two groups of words (counterbalanced between conditions) and a single order of presentation for each group. The words were chosen from the dictionary, were all nouns, and were all high frequency common words. Examples of words used were: moon, army, girl, ugly, rose, test, wish, milk.

APPENDIX D

DISTRACTION INSTRUCTIONS

"Now there are a couple of things I'd like you to do. There are some additional data we're interested in collecting. A professor in the Psychology department and I are in the process of collecting some norms regarding the degree to which common, high frequency, four letter nouns are associated with one another. Since we're going to take a short break now, we thought we'd ask everybody participating in this experiment if they would help us collect these norms. These data can be collected in a brief time period so we thought we would collect them during one of the longer experimental sessions during which the major experimental task didn't take up the full two hours. I'll turn this machine on and the instructions for this task will be read to you. Listen carefully and put your responses down on these answer sheets. When you're finished I'll come back and we'll get on with the remainder of the experiment."

NO DISTRACTION INSTRUCTIONS

"Now there are a couple of things I would like you to do. Before we get on with the remainder of the experiment, I have some equipment changes to make. While I'm doing this, I'd like you to sit here and wait for me. I'll be back as soon as I'm finished and we'll get on with the remainder of the experiment."

APPENDIX E

GENERAL OBSERVATION INSTRUCTIONS

"I have been conducting an experiment over the past few months to determine the relative communicative efficiency of educational films both with and without a soundtrack. Films are often used in classrooms as visual aids designed to portray some of the basic concepts of the particular subject material. Unfortunately, there has been a bit of disagreement among educators using the same film only with or without a sound track as to how valuable they are in communicating the concepts for which they were intended. Some teachers prefer to use the films without a soundtrack. This allows the teachers to provide the students with their own narrative regarding the important features of the film. Other teachers prefer to use those films with a soundtrack coupled with the teacher's narrative either preceding or following the film."

"Obviously there is no pat answer regarding which kind of film is more informative and suitable for educational purposes. Although we have received ample feedback from the teachers regarding these two kinds of films, we have not obtained the students' impressions and evaluations of these films. Hopefully, this experiment will aid in determining which kind of film students perceive as more suitable and practical for educational purposes."

"Thus far in the experiment we have shown half of the participants the films with sound and half of the participants the films without sound. After we finish running all of the participants, we will compare the general impressions and evaluations of the films of those participants viewing the film with sound to those scores of the participants viewing the film without sound. Before we can do this, however, we need to collect some more data on thesilent films."

"So, I am going to show you one brief silent film. This film is representative of the complexity of films shown in a classroom."

"O.K., I want you to sit back, relax, and watch this film as if you were watching a movie or television program, except for the fact that there will be no sound track accompanying the film."

At this point the pre-observation subjects receive the causal set instruction.

GENERAL DESCRIPTION INSTRUCTIONS

"This film should give you some general idea about the kinds of films in which we're interested. Now, there are a couple of things I would like you to do. First of all, I want you to tell me what happened in the film you just saw. Try to write this essay as if another individual, who had not seen the film, were going to read your essay and you want him/her to know and understand as much as possible about what happened. In writing this essay, you should include all the information you feel is necessary to communicate adequately what happened in the film. Try to write your essay using complete sentences, that is, do not outline your essay or write down short notes."

"You may do your writing in the first booklet in front of you. I will give you about twenty minutes to complete this essay. Although this may seem like a short period of time, I think you can do an adequate job in twenty minutes."

"Do not worry about any grammatical or spelling mistakes--you are not taking a composition exam. After you finish, please call me and I will collect your booklet."

At this point the pre-description subjects receive the causal set instruction.

"Should you have any questions, please call me and I will be glad to come and help you."

GENERAL EXPLANATION INSTRUCTIONS

"In this phase of the experiment we are interested in your *explanations of why the girl at the corner table behaved as she did in the film*. You will, as in the last phase of the experiment, write your explanations down on paper, this time in the second booklet before you. Try to write as much as you feel is necessary to communicate to someone else *why the girl behaved as she did*."

"Remember, assume that another person will be reading this and you want him/her to understand why you think the girl behaved as she did. Again, I will give you about twenty minutes to complete your essay. As before, please call me so I can pick up your second booklet."

At this point the pre-explanation subjects receive the causal set instruction.

"Should you have any questions while writing, please call me and I will come and try to help you."

APPENDIX F

POSTEXPERIMENTAL QUESTIONNAIRE

During one phase of the experiment I asked you to think about some questions and how you would answer them. I am interested now in how many of these questions you can remember. So, please write down, in as complete a form as possible, those questions you remember. Number your remembered questions 1, 2, etc.

GO ON TO THE NEXT PAGE. DO NOT RETURN TO THIS ONE.

Now we are interested in your impressions of why the girl behaved as she did within the film. Items A and B below deal with two broad possible causes for the girl's behavior. Please read over both A and B before you make a judgment about either. You will indicate the degree to which you think each of the two broad categories influenced the girl's behaviour by CIRCLING a scale number below each item. After you have responded to each of these items, please CIRCLE one number on the associated below the item to indicate how certain you are of your judgment at this time.

A. To what extent did something about the PERSONAL CHARACTERISTICS of the girl cause her to behave as she did within the film (for example: her values, and/or intentions, and/or motives, and/or personality traits, and/or attitudes, and/or mood, etc.)?

1	2	3	4	5	6	7	8	9
Had no effect								Had a very strong effect

How certain are you of the above rating?

1	2	3	4	5	6	7	8	9
very certain								very uncetain

B. To what extent did something about the SITUATION cause the girl to behave as she did in the film (for example: the amount of alcohol she and the others consumed, and/or her relationship with the guy who walked in toward the end of the film, and/or her relationship with the guy with whom she was initially sitting, and/or something about the document, and/or the other people surrounding her, etc.)?

1	2	3	4	5	6	7	8	9
Had no effect								Had a very strong effect

How certain are you of the above rating?

1	2	3	4	5	6	7	8	9
very certain								very uncetain

GO ON TO THE NEXT PAGE.

Below you will find several more items to which we would like you to respond. Circle the number which accurately characterizes your response to each question.

1. How accurately do you believe the girl's behavior in the film reflected her personality?

1	2	3	4	5	6	7	8	9
very accurately								not at all accurately

2. How much could be learned about the girl from the film?

1	2	3	4	5	6	7	8	9
very much								not much at all

3. During your observation of the film, how much did you think about the girl?

1	2	3	4	5	6	7	8	9
a great deal								very little

4. How much influence did the document exert on the girl's behaviorduring the film?

1	2	3	4	5	6	7	8	9
no influence								great influence

5. How much influence did the behavior of the guy who initially received the document exert on the girl's behaviour during the film?

1	2	3	4	5	6	7	8	9
no influence								great influence

6. How much of an influence did the amount of alcohol the girl consumed exert on her behaviour during the film?

1	2	3	4	5	6	7	8	9
no influence								great influence

7. To what extent do you feel the girl's behaviour during the film was appropriate?

1	2	3	4	5	6	7	8	9
very appropriate								not at all appropriate

GO ON TO THE NEXT PAGE.

NOW, PLEASE RATE YOUR IMPRESSIONS OF THE GIRL ON THE FOLLOWING SCALES.

1.	1 very thoughtful	2	3	4	5	6	7	8	9 not at all thoughtful
2.	1 very aggressive	2	3	4	5	6	7	8	9 not at all aggressive
3.	1 very accepting	2	3	4	5	6	7	8	9 not at all accepting
4.	1 very reasonable	2	3	4	5	6	7	8	9 very unreasonable
5.	1 very angry	2	3	4	5	6	7	8	9 not very angry
6.	1 very upset	2	3	4	5	6	7	8	9 not at all upset

GO ON TO THE NEXT PAGE.

Please answer the questions below to the best of your ability. Base your answers upon what you remember observing in the film. Please circle "YES" or "NO" where appropriate.

1. Did the girl and guy know or recognize anyone sitting in the lounge?
YES
NO

2. What kind of drink(s) did the girl and the guy, sitting at the corner table, order? ______________________________

3. How many waitresses were there? __________________________

4. Were there any pictures on the wall?
YES
NO
If YES, how many? ____

5. What was the girl's reaction to the drink she ordered? _

____

6. Did anyone leave the lounge?
YES
NO
If YES, please describe him/her: __________________________

____

7. Did anyone come into the lounge?
YES
NO
If YES, please describe him/her: __________________________

____

8. Had anyone in the lounge consumed too much alcohol?
YES
NO
If YES, please describe him/her? __________________________

____

GO ON TO THE NEXT PAGE.

Listed below are some questions which might be asked regarding the film. Please place a checkmark next to those questions to which you would like answers.

_________Would other people (for example, another female) have responded as the girl in the film responded to the situation?

_________What were the second guy's intentions (motives) for behaving as he did (before the girl shoved him)?

_________What were the girl's intentions (motives) for responding as she did?

_________What exactly triggered the girl's reactions?

_________How did the girl feel throughout the film?

_________Was the girl's behaviour specific to this situation?

GO ON TO THE NEXT PAGE.

Now for those items which you checked off, please rank order them in terms of their importance. The most important question would be marked 1, the next important question would be marked 2, etc. Place your numbers next to your checkmarks, please.

PLEASE GO BACK TO THE SIXTH PAGE TO COMPLETE THIS TASK. WHEN YOU ARE FINISHED, PLEASE CALL THE EXPERIMENTER.

NOTE: AT THIS TIME THE EXPERIMENTER PROVIDED THE SUBJECT WITH A SEPARATE QUESTION WHICH ASKED HIM/HER TO DESCRIBE THE PURPOSE OF THE EXPERIMENT

APPENDIX G
DETAIL AND ACCURACY RATING PROCEDURE INSTRUCTIONS

A. Read over the description of the film to ensure that you are quite familiar with the details of what happened in the film. You should refer back to this description each time you rate a new protocol.

B. Briefly skim over each protocol to familiarize yourself with the writing style of the subject and the contents of the protocol.

C. For each protocol, you will do the following:

1. If reference is made within the protocol to a particular act (action), you should put a checkmark in the appropriate space. For example, if reference is made within the protocol to Act 1 of Scene 1, you are to put a checkmark in Row 1 of Scene 1. If reference is not made to Act 1 of Scene 1 leave a blank. You will continue with this procedure for each Act described in the film description. You should rate each Scene in sequence.

2. After you have finished determining the number of acts within a scene which were mentioned in the protocol, you should determine the total number of acts mentioned and put this number in the space immediately below the last act of a scene.

3. After you have recorded this number, you are to make a ratings of how accurate the description of the scene in question was. If you believe that the scene description was very accurate, then you should put an "A" to the left of the detail rating. If you believe that the scene description was inaccurate, then you should put an "IA" in this space. If you are not sure of how accurate or inaccurate the description was, then put an "I" in this space.

4. You will continue with this rating procedure until you have finished rating the entire protocol.

5. After you have finished rating the entire protocol, you will offer two global ratings and detail and accuracy. You will offer these ratings on the two scales found at the end of the rating sheet. These overall ratings should be made taking into account the entire prctocol. Please try to keep your global or overall ratings of accuracy and detail consistent across the protocols.

6. Please note that accuracy is not only determined by the number of acts mentioned within a scene description. Although certain acts will be mentioned within a protocol, not all of these act descriptions will be accurate. Take this into account when you offer your accuracy rating.

7. Any problems you have rating a particular protocol should be noted on the rating sheet. If you feel you are having many problems rating any given protocol, then put this protocol aside and return to it later.

APPENDIX H

UNTRANSFORMED SAMPLE DESCRIPTION PROTOCOL

This film took place in a lounge, not dining, and was basically centered on one couple who entered shortly after the beginning of the film. The guy began talking to some people he met there but didn't sit down. The girl proceeded to take a table in a corner not far from where he was. He only talked for a short period of time and then sat at the table with her. She was upset about something but it wasn't obvious as to what it was. He smokes and is left handed. They are both in there twenties. He asked for the waitress and he ordered two drinks. While they were waiting the girl seemed to cheer up or at least was a little more at ease. When the waitress came with the drinks, which wasn't beer, as everyone else seemed to drinking, he tried his and thought it to be very good, but she didn't like hers at all. He proceeded to try it and thought that there was nothing wrong with it or at the most it wasn't bad. They seemed to be drinking the same kind of drink.

Anyways she wanted a new drink so he called for the waitress and then the girl either told her what was on her mind so to speak or told her what was wrong with the drink or both. The waitress said she would get her another drink and left the table pretty pissed off.

After that two girls walked in but seemed to have little to do with the film. Then the guy sitting at the table next to the couple got up slightly pissed while his friend told him to smarten up. He went over to another table and started talking to a couple there who seemed to have been drinking quite a lot as the table was full of beer bottles. They were possibly the same couple the original guy was talking to at the beginning of the film. Anyways shortly his friend dragged him back to their table and apoligized for his friends behavior. Then the waitress returned with her drinks for the girl who was complaining and proceeded to spill part of it over the couple with most of the blame going to the girl who complained in the first place not much was "said" about this incident. Then the drunken guy at the table next door made a pass at the waitress pulling her into his lap. She quickly fled.

Then another guy quite abruptly appeared on the scene and was sitting with our original couple. He was dressed quite fancy in comparison to everyone else there. He could have been a lawyer or in Real Estate etc. as the girl pulled from out of her purse what seemed to be a contract or the like in an envelope. They started discussing this and the girl seemed to be quite unhappy with a fair number of parts of it while the guy with just sort of went along for the ride.

TRANSFORMED VERSION OF DESCRIPTION PROTOCOL

PAR.	SENT.	CONCEPT	
1	1	1	The film took place in a lounge, not dining (type).
		2	The film was basically centered on one couple.
		3	The couple entered shortly after the beginning of the film.
	2	1	The guy began talking to some people.
		2	The guy met the people there.
		3	He didn't sit down with them.
	3	1	The girl proceeded to take a table in a corner.
		2	The table was not far from where the guy was.
	4	1	He only talked for a short period of time.
		2	He then sat down at the table with her.
	5	1	She was upset about something.
		2	It wasn't obvious what it was.
	6	1	He smokes.
		2	He is left-handed.
	7	1	They are both in their mid-twenties.

8 1 He asked for the waitress.
2 He ordered two drinks.

9 1 (While) They waited for {the drinks}.
2 The girl seemed to cheer up.
3 At least, she seemed more at ease.

10 1 The waitress came with their drinks.
2 The drinks were not beer.
3 Everyone else seemed to be drinking beer.
4 He tried his drink.
5 He thought it was very good.
6 But she didn't like hers at all.

11 1 He proceeded to try it {her's}.
2 He thought there was nothing wrong with it.
3 Or at the most, it wasn't bad.

12 1 They seemed to be drinking the same kind of drink.

PAR.	SENT.	CONCEPT	
2	1	1	Anyways, she wanted a new drink.
		2	So he called for the waitress.
		3	Then the girl told her (the waitress) what was on her mind, so to speak.
		4	Or told her what was wrong with the drink.
		5	Or both.
	2	1	The waitress said she would get her another drink.
		2	She (the waitress) left the table pretty pissed off.

PAR.	SENT.	CONCEPT	
3	1	1	After that, two girls walked in.
		2	They seemed to have little to do with the film.
	2	1	Then the guy sitting at the table next to the couple got up slightly pissed .
		2	His friend told him to smarten up.
	3	1	He (the guy who got up?) went over to another table.
		2	He started talking to a couple.
		3	They seemed to have been drinking quite a lot.
		4	Their table was full of beer bottles.
	4	1	They were possibly the same couple the original guy was talking to at the beginning of the film.
	5	1	Anyways, shortly his friend dragged him back to their table.
		2	He apologized for his friend's behavior.
	6	1	Then the waitress returned with her drinks for the girl who was complaining.
		2	(The waitress) proceeded to spill part of it all over the couple.
		3	Most of the blame going (went) to the girl who complained in the first place.
		4	Not much was "said" about this

incident.

7 1 Then the drunken guy at the table next door made a pass at the waitress.

2 [He] did this by pulling her [the waitress] onto his lap.

8 1 She quickly fled.

PAR.	SENT.	CONCEPT	
4	1	1	Then another guy abruptly appeared on the scene.
		2	{He} was sitting with our original couple.
	2	1	He was dressed quite fancy.
		2	At least, {he was dressed quite fancy} in comparison to everyone else there.
	3	1	He could be a lawyer or in Real Estate, etc.
		2	{As} the girl pulled out of her purse an envelope.
		3	It seemed to be a contract or the like.
	4	1	They started discussing this.
		2	{And} the girl seemed to be quite unhappy with a fair number of parts of it.
		3	{While} the guy {her date, John} just sort of went along for the ride.

APPENDIX I
CAUSAL CONTENT RATING PROCEDURE INSTRUCTIONS

Please follow the guidelines below in rating the protocol of each subject.

A. Briefly skim over each protocol to familiarize yourself with the writing style of the subject. While you are doing this, please note any errors that have been made in the numbering of the paragraphs, sentences, and concepts. If any errors have been made, please correct these. In the "TOTAL # OF SENTENCES" blank, three numbers will be recorded. The first number represents the total number of sentences, the second number represents the total number of paragraphs, and the third number represents the total number of concepts.

B. If any errors have been made in the numbering of sentences, paragraphs, or concepts, please change the appropriate number in the "TOTAL # OF SENTENCES" blank.

C. The dimensions a-g define what is meant by causal content. You will rate each CONCEPT which you believe contains causal content in terms of these dimensions. Before you attempt these ratings, you are to put the number of the target sentence containing causal content in the "SENTENCE NO." blank. You should then put the number of the concept within the sentence in column "1". You will then proceed to rate the concept in terms of the dimensions listed below:

(a) Put a checkmark in column 'a' if reference is made within the CONCEPT to what the girl's intentions were for behaving as she did within the film. This could refer to the purposiveness or goal-oriented nature of the action. E.g., "She wanted more attention from her boyfriend.", "...she wanted to clear up some matters regarding the document.", "...she was trying to make her boyfriend feel guilty for ignoring her.".

(b) Put a checkmark in column 'b' if reference is made within the CONCEPT to what immediate or past situational/ environmental/external factors could have triggered the final actions of the girl. E.g., "...she could have had a poor family life.", "Her date didn't introduce her to the couple sitting at the other table made her feel left out.", "The waitress spilling the drink on the girl's arm upset her."

(c) Put a checkmark in column 'c' if reference is made within the CONCEPT to the dispositional characteristics of the girl. This includes references to the general attitude of the girl, her personality characteristics, and simple trait labeling. E.g., "She was really aggressive.", "She was a real bitch.", "Her personality was changeable.", "She was really erratic.", "She's very immature.".

(d) Put a checkmark in column 'd' if reference is made within the CONCEPT to the feeling, emotional, or mood states of the girl as inferred from the physical gestures of the girl or the girl's actions. E.g., "She was obviously upset as she stormed out of the bar in a huff.", "She seemed upset.", "The waitress spilled the drink on the girl's arm and she yelled at her.", "She was in a bad mood.", "She felt left out.".

(e) If you have placed a checkmark in column 'd', I would like you to rate to what extent the feeling, emotional, or mood state was caused by internal and external causal factors. You will FIRST make your rating of the influence of INTERNAL FACTORS. On a five-point scale (0-4), please rate to what extent her feeling, emction or mood was caused by internal factors. 0 = not at all caused by internal factors and 4 = very much caused by internal factors. If you cannot determine from within the concept to what extent the girl's behavior was caused by internal factors, please put an 'i' for indeterminate. After you have offered this rating, put a "/" and THEN offer your rating of the extent to which her feeling, emotion, or mood was caused by EXTERNAL FACTORS. 0 = not at all caused by external factors and 4 = very much caused by external factors; 'i' represents indeterminate.

(f) You will now rate each concept containing causal content in terms of whether or not reference is made to the CONSISTENCY of the girl's behavior and whether or not this consistency reference implies high or low consistency. CONSISTENCY REFERS TO WHETHER OR NOT THE GIRL WOULD HAVE BEHAVED SIMILARLY IN OTHER SITUATIONS. High consistency references are defined as those which state that the girl would have behaved similarly in other situations. Low consistency references are defined as those which state that the girl would not have behaved similarly in other situations. So that, instead of putting a checkmark in column 'f', you will put the the letter H or L which refer to high and low consistency, respectively. E.g., "I think she would always have behaved in this way." (implies high consistency), "The girl's behavior probably would have been different if she had not been plagued by the document.", "She always wanted to get her own way.", "The guy was going to go get her, but he shrugged his shoulders as if to say 'Here we go again', and he sat back down.". If you cannot determine that the consistency reference implies high or low consistency, please put an 'i' in column 'f' indicating that the direction of the reference is indeterminate.

(g) You will now rate the CONCEPT in terms of whether or not reference is made to CONSENSUS information and whether or not this reference implies high or low consensus. CONSENSUS REFERS TO HOW OTHER PEOPLE WOULD HAVE BEHAVED IN THE SITUATION. High consensus references are defined as those which state that other people would have behaved as the girl did in this situation. Low consensus references are defined as those which state that other people would not have behaved as the girl did in this situation. So that, instead of putting a checkmark in column 'g', you will put the letters H or L which refer to high and low consensus, respectively. E.g., "I don't think that other people would have responded as she did.", "The girl's behavior was rather abnormal (unusual).", "Her actions were weird given the casual setting.".

D. The two categories listed below refer to how much emphasis was placed on internal and external causality within the CONCEPT. You should think of emphasis in terms of how explicit or salient the causal reference was within the concept unit.

2(a) In column '2a', please indicate how much emphasis was placed on internal/dispositional/personal causes within the concept unit (e.g., the intentions or motives of the girl, the personality characteristics of the girl, her attitude, her values, etc.).

0	1	2	3	4
no emphasis		a moderate amount of emphasis		a great deal of emphasis

2(b) In column '2b', please indicate how much emphasis was placed on external/environmental/situational causes within the concept unit (e.g., the atmosphere of the lounge, the girl's date, the other guy's treatment of the girl, the waitress spilling the drink on the girl's arm, etc.).

0	1	2	3	4
no emphasis		a moderate amount of emphasis		a great deal of emphasis

E. Now I would like you to go back and skim the protocol to insure that you have not omitted any CONCEPTS which you believe contain causal content. After you have done this, please total the number of checkmarks you have placed in each column. Then skip a row and put each sum in the appropriate column. You are to treat both H and L ratings as checkmarks for the purposes of these counts.

F. Finally, you are to rate the extent to which something about the PERSONAL CHARACTERISTICS of the girl (i.e., internal causes) and SITUATIONAL CHARACTERISTICS (i.e., external causes) caused the girl to behave as she did in the film. Please take into consideration any evaluative judgements the subject has made regarding both the girl (e.g., her personality, attitude, mood, etc.,) and the situation (e.g., her date, the other guy, the waitress, etc.). This will help you offer each of the ratings below as you believe the SUBJECT would have responded to these questions. You will offer your ratings of '6' and '7' after a global re-read of the protocol.

4. To what extent did something about the PERSONAL CHARACTERISTICS of the girl cause her to behave as she did within the film?

1	2	3	4	5	6	7	8	9
Had no effect								Had a very strong effect

5. To what extent did something about the CHARACTERISTICS OF THE SITUATION cause her to behave as she did within the film?

1	2	3	4	5	6	7	8	9
Had no effect								Had a very strong effect

G. Any comments or questions you may have regarding a particular protocol should be written on the bottom of your rating sheet.

ADDENDUM TO APPENDIX I

"NOTES TO JUDGES"

Category A: The key words to look for within category A (i.e., references to the girl's intentions) are: wanted, desired, felt the need to, felt she needed, intended, had to have, trying (tried), motivated (her motive) insisted upon, She did X in order to, and so forth.

Category B: Category B (i.e., reference to possible external influences) should always be checked if an external rating (>1) for mood has been made by you. Please note that this category refers to immediate or past external causes. Also, if you have put a rating greater than 1 in 2b, then you should put a checkmark in column b.

Category D: Please pay close attention to action verbs which might imply feelings, emotions, or moods. For example, "She ... stormed (stomped) does not necessarily indicate a feeling, emotion, or mood state. Mood is internal to the person, but unintentional. More than likely, mood will be caused by situational factors, rather than by personal factors. The key words or phrases for this category are: bad mood, upset, distraught, unhappy, ticked (pissed) off, angry felt left out, sullen, depressed, antagonistic, haughty, dejected, worried, etc.

Category E: You may come across sentences where it looks as if personal causation is indeterminate. Please do not be tempted to offer a numerical rating in these instances, particularly for internal causal influences.

Category F: This should be fairly straightforward. There was some disagreement here, however. Any problems rating category F (i.e.,global internal and external attribution ratings) should be noted on the rating sheet with the number of the problematic concept noted on your rating sheet.

Category G: We were really off on this one. Judge 3 classified more concepts as containing consensus information than did Judges 1 and 2. Remember consensus information refers to the normativeness of the girl's behavior. If the subject makes a value judgment about Heather's behavior, e.g., "...her behavior was weird...", "...she could have had a lot more consideration for others in the lounge...", this may be a reference tc consensus information.

Categories 4 and 5: We really disagreed on these ratings. One word of warning regarding your internal and external attribution ratings: From my experience, most subjects reserve ratings of "5" (on a 9-point scale) for neutral or cannot say, even though the midpoint is not labeled as such. If you "cannot say", then use the midpoint to indicate this.

APPENDIX J

Unit of Analysis

Two different methods of data aggregation were employed to ascertain interjudge reliability. In the first method, an average score on each of the dimensions for each judge was determined for each subject. This score was computed by summing across the ratings made by a judge (on the relevant dimension) and dividing this total by the number of concepts scored by the judge as containing causal content. For those categories where a numerical rating was required, the divisor (i.e., total number of causally relevant concepts) was multiplied by the maximum score (e.g., 9) obtainable on that dimension. These mean scores were used to conduct the analysis of interjudge reliability for each of the causal content categories. Aggregating the data in this fashion, however, failed to take into account the degree of overlap among the judge-designated causally relevant concepts. For example, the three judges, when scoring the nth protocol, may have all decided that ten of the twenty-five concepts contained within this protocol referred to some kind(s) of causally relevant information. However, the ten concepts selected by each judge may have been the same concepts. Thus, a perfect intercorrelation would have resulted among the three judges' ratings on one of the dimensions, i.e., the total number of causally relevant concepts, even though the same concepts were not scored as containing this content. Furthermore, using this method of data aggregation made it difficult tc determine the meaning of the intercorrelations obtained for the remaining dimensions.

Because of these problems, a method was developed which would better guarantee that ccmparisons could be made among the judges' ratings of 'like' concepts. To do this, the three judges' ratings of the training protocols were examined for the overlap of extracted causally relevant concepts. Comparisons among ratings were only made for those concepts for which there was perfect agreement that a particular concept contained some kind of causal content. The dimension(s) in terms of which each judge had qualified the causal content of the concept were not taken into account. Thus, the distribution of designated causally relevant concepts was identical for all the judges and, by design, there was a perfect intercorrelation on the total number of causally relevant concept dimension.

Average scores on each dimension were then computed with the analyses of interjudge reliability conducted using these mean scores. It is important to note that, although comparisons were made among the judges' ratings of the same concepts, the meaning of these comparisons remains ambiguous because of the fact that average scores were employed as the unit of analysis. Similar problems of interpretation are encountered using this method due to the unavailability of a statistical method allowing for a concept-by-concept comparison. That is, even though the judges may appear to be in perfect agreement that the nth protocol contains a references to, for example, the actress' behavioral intentions, they may not have chosen the same concepts as references to this dimension.

APPENDIX K

Changes in Interjudge Reliability as a function of Method of Analysis and Training Experience

Analysis A[9]

First set of ratings
(n = 18)

	J1J2	J1J3	J2J3
Behavioral Intention	.63 (.003)	.66 (.001)	.93 (.001)
References to external causes	.61 (.004)	.44 (.033)	.56 (.008)
References to dispositions	.93 (.001)	.92 (.001)	.88 (.001)
References to mood	.56 (.008)	.51 (.02)	.59 (.005)
References to consistency	.89 (.001)	.67 (.001)	.92 (.001)
References to consensus	-.04 (.434)	.07 (.394)	.54 (.010)
Internal attribution	.22 (.193)	-.03 (.458)	.33 (.089)
External attribution	.68 (.001)	.16 (.263)	.05 (.424)
Total number of causally relevant concepts	.93 (.001)	.92 (.001)	.82 (.001)

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[9] Analyses A and B differ in terms of the method employed to aggregate the judges' ratings. See Appendix J for a description of the two aggregation methods.

Analysis B

Second set of ratings
(n = 31)

	J1J2	J1J3	J2J3
Behavioral intention	.96 (.001)	.90 (.001)	.89 (.001)
References to external causes	.93 (.001)	.80 (.001)	.76 (.001)
References to dispositions	.93 (.001)	.94 (.001)	.83 (.001)
References to mood	.93 (.001)	.95 (.001)	.88 (.001)
References to consistency	.96 (.001)	.92 (.001)	.93 (.001)
References to consensus	.51 (.002)	.13 (.250)	.29 (.056)
Internal attribution	.66 (.001)	.33 (.034)	.29 (.060)
External attribution	.38 (.017)	-.19 (.148)	.25 (.091)
Total number of causally relevant concepts	1.00[10]	1.00[10]	1.00[10]

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[10] A perfect correlation was enforced due to the fact that the comparisons were based on only those concepts which all three judges rated as containing some amount or kind of causally relevant content.

Analysis A

Third set of ratings[11]
(n = 31)

	J1J2	J1J3	J2J3
Behavioral intention	.97 (.001)	.95 (.001)	.93 (.001)
References to external causes	.86 (.001)	.89 (.001)	.83 (.001)
References to dispositions	.95 (.001)	.99 (.001)	.95 (.001)
References to mood	.92 (.001)	.96 (.001)	.89 (.001)
References to consistency	.96 (.001)	.93 (.001)	.98 (.001)
References to consensus	.77 (.001)	.53 (.001)	.79 (.001)
Internal attribution	.61 (.001)	.60 (.001)	.62 (.001)
External attribution	.35 (.026)	.22 (.116)	.51 (.002)
Total number of causally relevant concepts	.9954 (.001)	1.00 (.001)	.9954 (.001)

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[11] The second and third set of ratings were based on the same sample of 31 protocols. These two sets of ratings differed in terms of the amount of experience judges had had with the scoring procedure at the time ratings were offered.